Jay C. Thomas
Michel Hersen

Editors

Handbook of Clinical Psychology Competencies

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Jay C. Thomas, Michel Hersen (Eds.)

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With 16 Figures and 44 Tables

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JAY C. THOMAS, Ph.D., ABPP
Professor and Assistant Dean
School of Professional Psychology
Pacific University
511 SW 10th Avenue, 4th floor
Portland, OR 97205
USA

MICHEL HERSEN, Ph.D., ABPP
Professor and Dean
School of Professional Psychology
HCP/Pacific University
222 SE 8th Ave., Suite 563
Hillsboro, OR 97123-4218
USA

springer.com

Preface

Fully qualified professional psychologists are expected to possess several competencies. These refer to professional knowledge, skills, and abilities gained through education and experience. Over the past several years, a number of competencies have been enumerated by professional bodies around the world, yet the nature of these competencies and how they are developed and maintained remains obscure. Statements commonly refer to broad domains, such as "assessment," "intervention," and "research" with the implication that many subdomains of competence are subsumed under each. The widespread commitment to the competence model brings a unifying force to professional psychology, yet it provides little guidance to educators, practitioners, and credentialing bodies in how to proceed with competency modeling or setting standards for achievement. Since competencies are developed, it is necessary to distinguish between basic and expert competencies. The basic level refers to clinicians who have completed an internship and some residency. A well-trained clinician should possess these basic competencies. Expert competencies are achieved by clinicians with additional training and experience and who work extensively with particular populations, techniques, or diagnoses. In much general writing, the distinction between basic and expert is lost and the readers are left to disentangle developmental levels and expectations themselves. An objective of this series is to clearly define these levels for the reader. In addition, the evidence base for psychological assessments and interventions is a critical consideration in judging competence. We have asked authors of the chapters to discuss the evidence relating to each practice presented in the series.

The purpose of this series is to provide definitions for each competency domain and provide detailed descriptions of the levels of competence and the developmental strategies for reaching each level. Volume I begins with the basic competencies of the clinical psychologists, and then the succeeding chapters present the competencies related to diagnosis and evaluation, research, and professional roles. These chapters follow a similar format: overview, basic competencies, expert competencies, and a summary. Volume II is devoted to the competencies associated with the interventions and treatments for adults and Volume III is concerned with the interventions and treatments for children and adolescents. In both volumes, we asked the authors to follow, whenever possible, a basic format of recognizing symptoms and assessment, maintenance factors, evidence-based treatment approaches, mechanisms of change underlying the intervention, followed by basic and expert competencies and how a psychologist transitions from the basic to the expert level. Certain topics required adjustment to this format, but even then the fundamental information is presented.

A large number of people contributed to the development of these three volumes. As the editors, our greatest debt is to the chapter authors who contributed considerable time, effort, and ingenuity to the books. We cannot thank them enough. Behind the scenes, Sharon Panulla at Springer rendered invaluable assistance to us. Our students, Blake Kirschner, Terri Draper, and Heidi Meeke, assisted us with the information gathering and the indexing of the volumes. Carole Londerée, our editorial assistant, is priceless. She organizes material, corresponds with authors, and keeps the editors on their toes. Thank you Carole for all you do.

Michel Hersen, Ph.D., ABPP   Jay C. Thomas, Ph.D., ABPP
Hillsboro, Oregon   Portland, Oregon

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About the Editors

Jay Thomas is Professor and Assistant Dean of the School of Professional Psychology at Pacific University. His Ph.D. is in Industrial and Organizational Psychology from the University of Akron. He holds specialty certification from the American Board of Professional Psychology (ABPP) in Industrial and Organizational Psychology and Organizational and Business Consulting Psychology. He is past President of the latter board and is on the Board of Trustees of ABPP. He has worked with clinical and counseling psychologists and students for since 1993 to improve their practice and training. Research interests include his organizational and industrial work in psychology with mental health, program evaluation, assessment, and outcome studies. Dr. Thomas' research and consulting team of students works with the Oregon State Hospital, Oregon Department of Corrections, Washington County Mental Health Court, and other institutions to create more effective organizations in the delivery of mental health services. He is the author of *Competency & Best Practice: Organizational & Business Consulting Psychology, Volume X of the Competencies in Psychology Specialties* and has edited a number of other books on mental health in the workplace, research methods, and personality and psychopathology.

Michel Hersen (Ph.D., ABPP, State University of New York at Buffalo, 1966) is Professor and Dean, School of Professional Psychology, Pacific University, Forest Grove, Oregon. He completed his post-doctoral training at the West Haven VA (Yale University School of Medicine Program). He is Past President of the Association for Advancement of Behavior Therapy. He has co-authored and co-edited 147 books and has published 226 scientific journal articles. He is co-editor of several psychological journals, including *Behavior Modification*, *Aggression and Violent Behavior: A Review Journal*, *Clinical Psychology Review*, and *Journal of Family Violence*. He is Editor-in-Chief of the *Journal of Developmental and Physical Disabilities*, *Journal of Anxiety Disorders*, and *Clinical Case Studies*, which is totally devoted to description of clients and patients treated with psychotherapy. He is Editor-in Chief of the 4-volume work entitled: *Comprehensive Handbook of Psychological Assessment.* He has been the recipient of numerous grants from the National Institute of Mental Health, the Department of Education, the National Institute of Disabilities and Rehabilitation Research, and the March of Dimes Birth Defects Foundation. He is a Diplomate of the American Board of Professional Psychology, Fellow of the American Psychological Association, Distinguished Practitioner and Member of the National Academy of Practice in Psychology, and recipient of the Distinguished Career Achievement Award in 1996 from the American Board of Medical Psychotherapists and Psychodiagnosticians. Finally, at one point in his career, he was in full-time private practice and on several occasions he has had part-time private practices.

List of Contributors

Ron Acierno
Ralph H. Johnson VAMC
Charleston, SC
USA
Medical University of South Carolina
Charleston, SC
USA

Angela D. Adkins
Behavioral Therapeutic Options
Fishersville, VA
USA

Arthur D. Anastopoulos
University of North Carolina at
Greensboro
Greensboro, NC
USA

Patricia A. Arean
University of California
San Francisco, CA
USA

Genevieve L. Y. Arnaut
Pacific University
Portland, OR
USA

Liat Ayalon
Bar Ilan University
Ramat Gan
Israel

Jennifer R. Bailey
University of Mississippi
University, MS
USA

Ruchi Bhargava
Midwestern University
Glendale, AZ
USA

Jessica Bolton
Pacific University
Portland, OR
USA

Barry R. Burkhart
Auburn University
Auburn, AL
USA

Kayreen A. Burns
Barry University
Miami Shores, FL
USA

William J. Burns
Nova Southeastern University
Fort Lauderdale, FL
USA

Brenda Bursch
University of California
Los Angeles, CA
USA

John Cairney
McMaster University
Hamilton, ON
Canada
University of Toronto
Toronto, ON
Canada

Christopher Campbell
University of Nebraska-Lincoln
Lincoln, NE
USA

Michael S. Christopher
Pacific University
Portland, OR
USA

Josh M. Cisler
University of Arkansas
Fayetteville, AR
USA

Stanley Cohen
West Virginia University
Morgantown, WV
USA

Christine A. Conelea
University of Wisconsin-Milwaukee
Milwaukee, WI
USA

Jason Connor
University of Queensland
Brisbane, QLD
Australia

Patrick K. Cook
Auburn University
Auburn, AL
USA

Frederick L. Coolidge
University of Colorado
Colorado Springs, CO
USA

Anna I. Coward
Fairleigh Dickinson University
Madison, NJ
USA

Kelly C. Cukrowicz
Texas Tech University
Lubbock, TX
USA

John F. Curry
Duke University
Durham, NC
USA

Julie A. Davidson
University of Mississippi
University, MS
USA

Lisa M. Degrass
University of North Carolina at
Greensboro
Greensboro, NC
USA

Timothey C. Denko
University of Pittsburgh
Pittsburgh, PA
USA

David DiLillo
University of Nebraska-Lincoln
Lincoln, NE
USA

Brad Donohue
University of Nevada
Las Vegas, NV
USA

Amanda A. Drews
The Children's Mercy Hospital
Kansas City, MO
USA

Joseph A. Durlak
Loyola University
Chicago, IL
USA

Timothy M. Emge
University of Nebraska-Lincoln
Lincoln, NE
USA

Paul M. G. Emmelkamp
University of Amsterdam
Amsterdam
The Netherlands

Gregory A. Fabiano
University at Buffalo
Buffalo, NY
USA

William Fals-Stewart
University of Rochester
Rochester, NY
USA

Brian A. Feinstein
Boston Healthcare System
Boston, MA
USA

Karlee D. Fellner
Alberta Hospital Edmonton
Edmonton, AB
Canada

Yolanda M. Fernandez
Millhaven Institution
Bath, ON
Canada

Jill C. Fodstad
Louisiana State University
Baton Rouge, LA
USA

Martin E. Franklin
University of Pennsylvania
Philadelphia, PA
USA

Kurt A. Freeman
Oregon Health &
Science University
Portland, OR
USA

Jon Frew
Pacific University
Portland, OR
USA

Patrick C. Friman
Boys Town and The
University of Nebraska
School of Medicine
Boys Town, NE
USA

Adeena M. Gabriel
Fairleigh Dickinson University
Madison, NJ
USA

Calvin P. Garbin
University of Nebraska-Lincoln
Lincoln, NE
USA

David M. Garner
River Centre Clinic
Sylvania, OH
USA

Robert J. Gatchel
The University of Texas
at Arlington
Dallas, TX
USA

Gerald Goldstein
VA Pittsburgh Healthcare System
Pittsburgh, PA
USA

Jennifer D. Gottlieb
Dartmouth Psychiatric
Research Center
Concord, NH
USA
Massachusetts General Hospital
Schizophrenia Program
Boston, MA
USA

Ross W. Greene
Harvard Medical School
Boston, MA
USA

Daniel F. Gros
Ralph H. Johnson VAMC
Charleston, SC
USA
Medical University of
South Carolina
Charleston, SC
USA

Alan M. Gross
University of Mississippi
University, MS
USA

Christopher W. Hanes
Indiana University
Bloomington, IN
USA

David J. Hansen
University of Nebraska-Lincoln
Lincoln, NE
USA

Julie Hicks Patrick
West Virginia University
Morgantown, WV
USA

Dave A. Hill
Pacific University
Portland, OR
USA

Gregory A. Hinrichsen
Albert Einstein College of Medicine
New York, NY
USA
Health and Aging Policy Fellowship
Washington, DC
USA

Elise K. Hodges
University of Michigan
Medical Center
Ann Arbor, MI
USA

Julie N. Hook
Rush University Medical Center
Chicago, IL
USA

Debra A. Hope
University of Nebraska-Lincoln
Lincoln, NE
USA

Sarah Hope Lincoln
Harvard University
Cambridge, MA
USA

Laura D. Hovey
University of Toledo
Toledo, OH
USA

Kathryn L. Humphreys
University of California-Los Angeles
Los Angeles, CA
USA

Stephen D. A. Hupp
Southern Illinois University Edwardsville
Edwardsville, IL
USA

Philinda S. Hutchings
Midwestern University
Glendale, AZ
USA

Vanessa M. Jacoby
West Virginia University
Morgantown, WV
USA

Sandra Jenkins
Pacific University
Portland, OR
USA

Jeremy D. Jewell
Southern Illinois University Edwardsville
Edwardsville, IL
USA

Bethany C. Johnson
University of Nebraska-Lincoln
Lincoln, NE
USA

Cynthia R. Johnson
University of Pittsburgh
Pittsburgh, PA
USA

Kirsten Johnson
University of Vermont
Burlington, VT
USA

W. Brad Johnson
United States Naval Academy
Annapolis, MD
USA

Heidi Lary Kar
Stony Brook University
Stony Brook, NY
USA

Michele J. Karel
Harvard Medical School
Brockton, MA
USA

David J. Kavanagh
Queensland University of Technology
Brisbane, QLD
Australia

Christopher D. Keiper
River Centre Clinic
Sylvania, OH
USA

Soonie Kim
Portland DBT Program, PC
Portland, OR
USA

Jeremy C. Kinser
Indiana University
Bloomington, IN
USA

Nancy D. Kishino
West Coast Spine Restoration Center
Riverside, CA
USA

Wendy K. K. Lam
University of Rochester
Rochester, NY
USA

Giulio E. Lancioni
University of Bari
Bari
Italy

Martin J. La Roche
Harvard Medical School
Cambridge, MA
USA

Monique Leblanc
Southeastern Louisiana University
Hammond, LA
USA

Ellen Leen-Feldner
University of Arkansas
Fayetteville, AR
USA

Deborah Lewis
Midwestern University
Glendale, AZ
USA

Susan T. Li
Pacific University
Hillsboro, OR
USA

May Lim
Oregon Health & Science University
Portland, OR
USA

Jeffrey M. Lohr
University of Arkansas
Fayetteville, AR
USA

James K. Luiselli
May Institute
Randolph, MA
USA

Ruth E. Mann
National Offender Management Service
London
UK

Brian K. Martens
Syracuse University
Syracuse, NY
USA

Elaine K. Martin
University of Nebraska-Lincoln
Lincoln, NE
USA

Brian P. Marx
VA Boston Healthcare System
Boston, MA
USA

Johnny L. Matson
Louisiana State University
Baton Rouge, LA
USA

Paul G. Michael
Pacific University
Hillsboro, OR
USA

Kim T. Mueser
Dartmouth Psychiatric Research Center
Concord, NH
USA

Vey M. Nordquist
University of Tennessee
Knoxville, TN
USA

Darcy C. Norling
Portland DBT Program, PC
Portland, OR
USA

Jebediah J. Northern
Bowling Green State University
Bowling Green, OH
USA

William H. O'Brien
Bowling Green State University
Bowling Green, OH
USA

Carmen K. Oemig
Bowling Green State University
Bowling Green, OH
USA

Bunmi O. Olatunji
Vanderbilt University
Nashville, TN
USA

K. Daniel O'Leary
Stony Brook University
Stony Brook, NY
USA

Thomas H. Ollendick
VPI & SU Child Study Centre
Blacksburg, VA
USA

Mark F. O'Reilly
The University of Texas at Austin
Austin, TX
USA

Meaghan E. Pariseau
University at Buffalo
Buffalo, NY
USA

Donald E. Polkinghorne
University of Southern California-Los
Angeles
Los Angeles, CA
USA

Mark Powers
University of Amsterdam
Amsterdam
The Netherlands

Robert A. Prentky
Fairleigh Dickinson University
Madison, NJ
USA

John R. Reddon
Alberta Hospital Edmonton
Edmonton, AB
Canada

Derek D. Reed
Melmark New England
Andover, MA
USA

Mark A. Reinecke
Northwestern University
Chicago, IL
USA

David Reitman
Nova Southeastern University
Fort Lauderdale, FL
USA

Jose Rey
Nova Southeastern University
Ft. Lauderdale, FL
USA

Craig N. Sawchuk
University of Washington Medical Center
Seattle, WA
USA

Erin F. Schlegel
Texas Tech University
Lubbock, TX
USA

Joseph R. Scotti
West Virginia University
Morgantown, WV
USA

Daniel L. Segal
University of Colorado
Colorado Springs, CO
USA

Thomas L. Sexton
Indiana University
Bloomington, IN
USA

Robin L. Shallcross
Pacific University
Portland, OR
USA

Ashli J. Sheidow
Medical University of South Carolina
Charleston, SC
USA

Jeff Sigafoos
Victoria University of Wellington
Wellington
New Zealand

Ashvind N. Singh
Metropolitan State Hospital
Norwalk, CA
USA

Nirbhay N. Singh
ONE Research Institute
Midlothian, VA
USA

Phillip N. Smith
Texas Tech University
Lubbock, TX
USA

David L. Streiner
University of Toronto
Toronto, ON
Canada

Sophia Talbott
University of Pennsylvania
Philadelphia, PA
USA

Michael E. Thase
University of Pennsylvania
Pittsburgh, PA
USA

Kendra Tracy
University of Nevada
Las Vegas, NV
USA

Warren W. Tryon
Fordham University
Bronx, NY
USA

Benjamin T. P. Tucker
University of Wisconsin-Milwaukee
Milwaukee, WI
USA

Peter W. Tuerk
Ralph H. Johnson VAMC
Charleston, SC
USA
Medical University of South
Carolina
Charleston, SC
USA

Sandra Twardosz
University of Tennessee
Knoxville, TN
USA

Rebecca K. Vujnovic
University at Buffalo
Buffalo, NY
USA

Lenore E. Walker
Nova Southeastern University
Fort Lauderdale, FL
USA

Alyson Williams
Pacific University
Portland, OR
USA

Douglas W. Woods
University of Wisconsin-
Milwaukee
Milwaukee, WI
USA

Andrew R. Yartz
The University of Vermont
Burlington, VT
USA

Matthew Yoder
Ralph H. Johnson VAMC
Charleston, SC
USA
Medical University of South Carolina
Charleston, SC
USA

J. Christopher Young
University of Mississippi
University, MS
USA

Ross Young
Queensland University of Technology
Brisbane, QLD
Australia

Michael J. Zvolensky
The University of Vermont
Burlington, VT
USA

Volume I
General Competencies

Basic Competencies

1   Competencies in Adult Clinical Psychology

Warren W. Tryon

Abstract: This chapter addressed the following background issues: evidence-based medicine, the empirically supported treatment debate, what constitutes evidence, and competency. The National Council of Schools and Programs in Professional Psychology (NCSPP) educational model was discussed including the following components: relationship, assessment, intervention, consultation and education, management and supervision plus research and evaluation. Six specific foundational competencies were considered including their essential components, behavioral anchors, and assessment methods that indicate readiness for practicum, internship, and practice. These foundational competencies include: reflective practice and self-assessment, scientific knowledge and methods, relationships, individual and cultural diversity, knowledge of ethical and legal standards and policies and interdisciplinary systems. The following six functional competencies were discussed: assessment-diagnosis-case conceptualization, intervention, consultation, research and evaluation, supervision and teaching, plus management and administration. Essential components with behavioral anchors and assessment methods that indicate readiness for practicum, internship, and practice were identified. What being expert entails was briefly discussed.

1.1   Overview

Clinical psychologists have been concerned about competency since formal training began but have differed with regard to what it means to be competent. Evaluating competency requires a context of what a clinical psychologist should know, and that is determined by the theoretical orientation and training model. Relevant questions include: How much science training should clinical psychologists have? How developed should their professional skills be upon graduation? Graduates seen as competent from one training model may be seen as marginally competent, if competent at all, from a very different training model. The history and theoretical foundations of clinical psychology (cf. Tryon, 2008a) support different views of competency. The American Psychological Association (APA) is a diverse organization that currently consists of 56 divisions. It should not be surprising that views on competency are similarly diverse. The APA Committee on Accreditation requires training, and presumably competence, concerning the following six bases: (1) history and systems, (2) biological, (3) cognitive and affective, (4) social, (5) individual, and (6) developmental. However, the Committee on Accreditation does not specify competencies that must be achieved. They leave each program to define its own training goals and evaluate the extent to which these goals are realized. It follows that programs based on contrasting training models will graduate students with different competencies. The "Competency Developmental Achievement Levels (DALs) of the National Council of Schools and Programs in Professional Psychology (NCSPP)" (http://www.ncspp.info/pubs.htm) are quite specific with regard to the knowledge, skills, and

attitudes that constitute competency to begin practicum, begin internship, and complete the doctoral degree but a comment made when the DALs were circulated by email minimized their impact by indicating that they are training guidelines that need not be adhered to and can be modified to meet program goals. This liberty to follow, or not, and to revise at will competency criteria increases rather than decreases the range of competencies graduates from clinical programs will have. The public interest requires more certain competency criteria.

Identifying and developing specific clinical competencies represents a major pedagogical change in the training of clinical psychologists. Such clinical focus has largely been brought about by schools of professional psychology. We shall see that their competency criteria involve evidence-based practice where evidence means scientific evidence (not just accumulated personal experience) although these matters have not been fully resolved. Before considering specific competency criteria we identify several background issues. Evidence-based medicine provides an important context in which to evaluate competency for clinical psychologists. The medical profession has only recently based its practices on scientific evidence. Clinical psychologists have only recently become interested in evidence-based practice, with a special focus on empirically supported treatments and principles. We conclude that clinical psychologists are ethically bound to best serve the public by using the best practices: i.e., practices supported by the best evidence. We consider the question "what constitutes evidence"? Then we directly address the question of what constitutes competency. An overview and more detailed presentation of the competency training model developed by the National Council of Schools of Professional Psychology (NCSPP), the most detailed model currently available, is provided. It specifies foundational and functional competencies at three developmental levels: readiness for practicum, internship, and practice.

1.2   Background Issues

1.2.1   Evidence-Based Medicine

At the dawn of time, societies authorized, and thereby legitimized, practitioners of the healing arts based on the need to care for the sick rather than on any special competencies demonstrated by them. Claims of special healing powers may have been made by practitioners but supporting evidence of effectiveness and/or competency was not required. Practitioners, including shamans, witches (pagan healers), priests, clergy, and physicians developed methods for treating sick people. These methods were handed down from generation to generation and established traditions of healthcare based on precedent and consensus rather than evidence of efficacy. Competency was defined and evaluated by senior practitioners who modeled approved methods and trained their apprentices accordingly. Questioning these methods was generally not well received. Eddy (2005) noted that until about 1965, it was widely believed that medical competency was insured by medical education, including medical school, internship and residency training, licensure, continuing education, and consultation with colleagues. Clinical judgment was considered sufficient to identify the best course of action, including testing and treatment decisions. Medical decision making was not studied nor was there any felt need to study it. Insurance coverage and medical necessity were reciprocally defined. If most physicians were performing a procedure, then it was considered to be medically necessary and should be

covered by insurance. On the contrary, evidence began to appear that questioned this view. Wennberg and Gittelsohn (1973) documented wide variations in health care occurring within small areas. When two physicians recommend different treatments for similar patients it is unlikely that they are both correct. Additional evidence surfaced showing that medical experts deemed some physician decisions to be inappropriate. All of this leaves aside the competency of individual physicians in their performance of these procedures. It is most unlikely that all physicians are equally skilled. Clearly some are more competent than others. No definition of competency has been agreed to and used to regulate the practice of medicine.

Eddy (2005) identified a second problem in the medical profession: i.e., the gap between science and practice. It was estimated that only 15% of medical practices were based on science. Physicians, like psychologists, frequently do not follow clinical practice guidelines derived from controlled research. This is especially disturbing given a report by Eagle et al. (2005) that 30-day and 1-year mortality rates are decreased when cardiologists follow clinical practice guidelines. Rello et al. (2002) reported that physicians do not consistently follow practice guidelines even to prevent ventilator-associated pneumonia. They further noted that "… the degree of nonadherence seems to be independent of the strength of the evidence in support of specific interventions that have been reported in previous trials" (p. 659). Cabana et al. (1999) asked "why don't physicians follow clinical practice guidelines?" and reported knowledge, attitude, and behavioral barriers against adopting clinical guidelines that are relevant to clinical psychology. Greenhalgh (2002) remarked on the conflict between intuition and evidence; a dialectic tension found in the debate over the role of empirically supported treatments in clinical psychology. Drake et al. (2001) reported that pharmacological and psychosocial interventions that are known to be effective are not widely offered in mental health settings. These authors reported "Research shows that education alone does not strongly influence the practice behaviors of health care providers" (p. 47) and they indicated that "Financial incentives and administrative rules and regulations must be aligned to support the implementation of evidence-based practices" (p. 52). Entering "why don't physicians follow clinical practice guidelines?" as a search term into Google Scholar yielded 5,860 hits thus revealing a great deal of discussion and concern regarding this important topic. The current "Competency Developmental Achievement Levels (DALs) of the National Council of Schools and Programs in Professional Psychology (NCSPP)" indicate that competent clinical psychologists use evidence-based interventions and cited the APA (2006) presidential task force report on evidence-based practice.

Eddy (2005) noted a related third problem, in that it takes years for the results of Randomized Controlled Trials (RCTs) to influence clinical practice. Some procedures that physicians took for granted to be effective were studied and found to be ineffective. I have not seen a figure estimating the percentage of psychological practices that are based on science. Herbert (2003) noted that "Despite important advances in the development and empirical evaluation of psychotherapies over the past three decades, the chasm between clinical practice and the scientific literature is as wide as ever" (p. 412). Few practicing clinicians use empirically supported treatments. They mainly rely on the traditions of care that they learned in graduate school and continue to do so throughout their professional career despite access to continuing education. Regrettably, some of these practices have been shown to be harmful (cf. Herbert, 2003). Lambert, Shapiro, and Bergin (1986) reported that as many as 10% of clients deteriorate during psychotherapy and end up worse off than when they began. Mays and Franks (1985) edited a book entitled *Negative outcome in psychotherapy and what to do about it.* Our ethical mandate

to do no harm requires that we discontinue these practices even if we were taught them in accredited doctoral training programs. For example, the theoretical construct of symptom substitution is without empirical basis thereby falsifying interventions and training practices based on, derived from, it (cf. Tryon, 2008b).

Eddy (1990) introduced the term "Evidence-based Guidelines" (EBG) to distinguish methods of medical practice based on evidence from methods based on subjective judgment and/or consensus. It is noteworthy that this recommendation resulted in substantial changes to cancer related health checkup guidelines issued by the American Cancer Society. EBG insisted that testing must reduce morbidity or mortality, medical benefits must outweigh risks, cost must be reasonable and comparable with expected benefits, and recommendations must be practical and feasible. Guyatt and Rennie (1993) first published the term evidence-based medicine. Eddy (2005) reported the history of how the medical community began to adopt evidence-based guidelines. This relatively recent effort to base medical practice on science seems inconsistent with the emphasis placed on chemistry, physics, and mathematics for pre-med majors and on the MCAT examination required of all applicants to medical schools.

Eddy (2005) identified a second type of evidence-based medicine that he termed Evidence-based Individual Decision Making (EBID). Whereas EBG is conducted by multidisciplinary teams using scientific methods to produce best medical practices, EBID is done by individuals using their own implicit and personal methods to make decisions about best medical practices. Eddy (2005) observed that EBID is what passes for EBM; not the more rigorous EBG. Eddy (2005) also provided several reasons for extending EBM to EBG. The author concluded that both EBG and EBID should be included in any comprehensive implementation of EBM. Guyatt et al. (2000) reported that beginning in 1992 JAMA published 24 User Guides for practicing clinicians. The American Psychiatric Association also publishes practice guidelines (http://www.psych.org/MainMenu/PsychiatricPractice/PracticeGuidelines_1.aspx); the American Psychological Association does not and seems unlikely to do so in the foreseeable future. Do psychologists who oppose basing clinical psychology on psychological science want physicians and dentists to base their professional practice on science?

In sum, the notion that medical care should be based on science is a very recent concept given the long history of medical practice in Western culture. This new idea is more easily stated than defined. Eddy (2005) reported that the most commonly cited definition of EBM is "the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients" (p. 9). Epstein and Hundert (2002) noted that "there is no agreed-upon definition of competence that encompasses all important domains of professional medical practice" (p. 226). Agreement has still not been reached. Guyatt et al. (2000) recognized that evidence is never enough for clinical decision making but provides a solid basis for doing so thereby leaving room for valid individual differences of clinical opinion. Psychologists can build upon this base without adopting the medical model of disease/symptom formation. The scientific method is a disciplined and fruitful epistemology for moving from a lesser to a greater state of knowledge. Nathan and Gorman (2002) noted that "In the absence of science, opinion prevails" (p. v). Meehl (1997) pointedly stated that "Since clinical experience consists of anecdotal impressions by practitioners, it is unavoidably a mixture of truths, half-truths, and falsehoods. The scientific method is the only known way to distinguish these, and it is both unscholarly and unethical for psychologists who deal with other persons' health, careers, money, freedom, and even life Itself to pretend that clinical experience suffices and that quantitative research on diagnostic and therapeutic procedures is not needed" (p. 91). That

science may never fully guide clinical practice is not a sufficient reason to avoid the professional discipline imposed by evidence-based practice.

1.2.2 Empirically Supported Treatment Debate

Psychologists, like physicians, are divided with regard to basing their clinical practice on psychological science. Psychologists, like physicians, have developed their own cherished traditions of health care and seek to perpetuate them and the professional associations dedicated to their promulgation. While the practice of assessment in clinical psychology is rooted in psychometrics, psychological interventions of all types have largely emerged from clinical practice. During his 1909 lectures at Clark University, Freud proposed a theory of personality and psychopathology and offered a method of psychotherapy based on his personal clinical practice; not on scientific study. Tryon (2008a) referred to this as the "big bang of clinical psychology" because Freud's theory and therapy rapidly spread across American, then Europe, followed by most of the rest of the world. Freud's theory and therapy were soon modified into several schools of psychoanalytic thought and practice, which continue to develop largely outside of psychological science. Carl Rogers (1942, 1951) was arguably the first psychologist to subject therapy to scientific study. Eysenck (1952) alarmed psychologists when he reported that there was no scientific evidence that psychotherapies were more effective than no treatment. Lambert et al. (1986) reported that as many as 10% of clients deteriorate during psychotherapy and end up worse off than when they began. Mays and Franks (1985) published an edited a book on this issue. Professional freedom to practice in any way one chooses regardless of evidential support now came into conflict with the ethical principle of beneficence; to do no harm.

Psychologists also administer tests that impact decisions that influence the lives of millions of people each year. Once upon a time psychologists had full professional discretion over test selection. Professional training was considered adequate preparation for competent clinical practice. Unfortunately such professional discretion led to adverse results due to administration of unreliable tests and/or tests not valid for the intended purposes. Contemporary ethical standards that govern psychological testing (American Educational Research Association, American Psychological Association and National Council on Measurement in Education, 1999) clearly direct psychologists to only use tests with acceptable reliability that have been validated for the intended purposes of testing. Deviations from this practice are sometimes required in situations where a reliable test has not yet been validated on the population that the psychologist serves. Psychologists are then directed to proceed with caution and to fully inform the consumer about the issues and limitations involved. Concerns over the restrictions on the professional practicing of psychological testing were never loudly voiced. Resulting restrictions have not adversely impacted professional psychology. The ethical principles that govern psychological testing are more than guidelines that clinical programs can revise to fit goals of their chosen training model.

While the more general ethical standards that govern psychologists (American Psychological Association, 2002) do not similarly direct psychologists to only use interventions that have been shown to be effective, the recommendation to limit clinical interventions to empirically supported treatments (ESTs) can be justified on parallel ethical grounds. If ethical practice requires psychologists to limit their use of psychological tests to instruments with demonstrated

reliability and validity, then ethical practice should also psychological interventions to methods that have demonstrated efficacy and effectiveness. Perhaps a greater proportion of practice income derives from intervention than from testing in which case ethical constraints posed less of a burden for testing than for intervention. Nathan and Gorman (2000) discussed efficacy and effectiveness. *Efficacy* is primarily concerned with replication of treatment effects that exceed appropriate control conditions. The intervention must be sufficiently well defined that clinicians can be trained to consistently implement it across therapists and over time with well defined clinical groups based assessed on objective measures. *Effectiveness* is primarily concerned with feasible results that can be obtained in clinical settings. Studies that demonstrate efficacy and effectiveness also provide evidence that these methods do not produce harm. Whereas the American Psychiatric Association publishes Practice Guidelines based on empirical evidence (http://www.psych.org/MainMenu/PsychiatricPractice/PracticeGuidelines_1.aspx), the American Psychological Association does not. The "Competency Developmental Achievement Levels (DALs) of the National Council of Schools and Programs in Professional Psychology (NCSPP)" stipulate that competent clinical psychologists use evidence-based interventions. It is always possible to leave this matter to insurance companies to determine the services they will reimburse for and to lawyers who may sue clinicians for malpractice but this free market buyers beware guild approach is not necessarily in the public interest.

Arguments against limiting practice by empirical findings typically take one of three forms. One line of argument criticizes the short comings of existing research. Research samples are often monosymptomatic and unrepresentative of clinic samples which are typically comorbid. Therapy manuals require that the same procedures be used for every client within an experimental design condition which makes clinical practice rigid and unrepresentative. Research findings have not yet been shown to generalize across dimensions of diversity, including race, age, sex, and SES. While these criticisms are valid, they are not reasons to abandon outcome research and/or continue to prefer interventions that have even less empirical support. Limited positive results provide at least partial support for an intervention and indicate that it may not be harmful. Unstudied interventions may or may not be beneficial. They might even be harmful (cf. Herbert, 2003; Lambert, Shapiro, & Bergin, 1986; Mays & Franks, 1985).

Testimonials by clinicians and reference to common practice do not constitute persuasive evidence of efficacy or effectiveness. Eddy (2005) noted that some procedures that physicians took for granted to be effective were, based on controlled research, found to be ineffective. For example, bloodletting was once a common medical practice supported by clinical testimony. Benjamin Rush, a prominent physician and founding psychiatrist, advocated bloodletting to treat yellow fever. When patients survived, he attributed this outcome to the effectiveness of his intervention. When patients died he reasoned that they were too sick to be saved. Either way, clinical practice supported the efficacy of bloodletting in his mind. We now know that patients who survived most likely did so in spite of bloodletting; not because of it, and some patients who died probably did so because of bloodletting. How could such a brilliant and noted physician and psychiatrist as Benjamin Rush be so misguided by clinical evidence? How can clinical evidence be so misleading? At least six reasons that reflect common human foibles can be given. First, expectation derived from theory and reports of others psychologists can cause us to see what we want to see. Kunda (1990), a social psychologists summarizing research regarding dissonance theory, noted that "There is considerable evidence that people are more likely to arrive at conclusions that they want to arrive at …" (p. 480). This principle has an even longer history in clinical psychology. Intuitive biases are also at work. Second, Chapman (1967) defined

illusory correlation as "the report by an observer of a correlation between two classes of events which in reality *(a)* are not correlated, or *(b)* are correlated to a lesser extent than reported, or *(c)* are correlated in the opposite direction than that which is reported" (p. 151). Chapman and Chapman (1967) reported results of six studies demonstrating that undergraduates who were presented with Draw-A-Person pictures that were *randomly* paired with clinical symptoms rediscovered the same relationships that clinicians reported based on their clinical practice. Third, Tversky and Kahneman (1971) revealed that people have a belief in the "Law of Small Numbers," where they regard a small randomly drawn sample as highly representative to the population in all important ways. Clinicians typically draw inferences and make generalizations from small unrepresentative samples. Freud is an excellent example of this practice. Fourth, Tversky and Kahneman (1983) exposed a fundamental flaw in human reasoning. Whereas the probability of a conjunction [P(A&B)] cannot exceed either the probability of A or the probability of B, the authors reported that experts and lay people exceed this limit by using intuitive heuristics. Fifth, Meehl and Rosen (1955) noted that clinicians rarely consider the impact of base rates on cutting scores for diagnostic decisions despite their considerable importance. A further exploration of related factors that remain relevant today is Meehl's book entitled *Statistical versus Clinical Prediction.* Sixth, psychologists convicted of unethical practices sometimes claim, as part of their defense, that their clinical experience shows that many or most of their clients benefited from their treatment (cf. Koocher & Keith-Spiegel, 2008). Clinicians are people too and can see benefit where none exists and where others see harm. Considerable pseudoscience can be found in clinical psychology (Lilienfeld, Lynn, & Lohr, 2003) based on these foibles and others. Clinicians must either protect themselves, or be protected by others, from these human foibles by controlled research when making causal inferences.

A second line of argument against scientific research is that some interventions are too complex to be studied scientifically. Some interventions apparently cannot be adequately characterized by treatment manuals such that independent observers can verify that this therapy is being used. A corollary complaint is that some treatments aim to do substantially more than change behavior or reduce symptoms, and that these goals cannot be sufficiently described or characterized to enable the construction of reliable and valid outcome measures. Together these features preclude application of the scientific method. They appear to constitute applied philosophy. A crucial difference between science and philosophy is that scientific questions can be investigated and are potentially falsifiable by empirical data. Existential interventions share more with philosophy than science when they lack the defining element of falsifiability. Hence, convincing empirical evidence of efficacy or effectiveness of such interventions cannot be expected. The pertinent ethical question regarding consumer protection that arises is whether the inability to conduct adequate scientific studies constitutes a free pass such that these services can continue to be offered and reimbursed by third parties, especially if they are wide spread and have a long history within clinical psychology. Or, should the absence of evidential support call such practices into question given that while these interventions may be effective, they may also not be effective, and could be harmful (cf. Herbert, 2003; Lambert, Shapiro, & Bergin, 1986, Mays & Franks, 1985). For example, the failure of symptom substitution to occur undercuts the psychodynamic theory of symptom formation (cf. Tryon, 2008b). It also renders baseless the validity of interpreting physical symptoms as manifestations of psychodynamic conflicts.

A third line of argument concerns respect for diversity and resistance regarding limitations to professional practice. Our ethics code requires respect for diverse methods and models of clinical practice including professionals who practice from models different than one's own

(American Psychological Association, 2002). However, diversity can become problematic as follows. Arrange clinical practices along a spectrum that begins with the best methods at one end and moves through less effective methods to methods that clearly under serve the public, and finally to the other end of the spectrum characterized by unethical and illegal practices. Respect for diversity gives clinicians the right to under serve and/or poorly serve the public. Our profession draws the line only at unethical and illegal practices. Then it requires us to speak disapprovingly to the responsible clinician and possibly report their actions to the proper authorities. All other levels of clinical practice, including marginal practices that poorly serve the public, are accepted and protected under the principle that we value diversity and respect the right of other psychologists to practice anyway they choose.

A consequence of diversity is that a case can be made for "customary care" when enough professionals practice in a particular way regardless of what those practices are with the exception of unethical and illegal methods. Bloodletting once constituted customary medical care. Practitioners of all stripes can defend their actions on the basis that many other graduates of accredited programs provide similar services. More popular programs can graduate more psychologists and more strongly determine "customary care" regardless of how they train students. The Committee on Accreditation of the American Psychological Association evaluates programs based on the programs stated training model rather than on the degree to which best practices are taught. This policy accepts all professional training as equally valuable. It gives professional training programs the right to teach their students almost anything they choose including methods that under serve and/or poorly serve the public. Promulgating the DAL competency criteria as guidelines that can be revised by faculty to suit program goals further abdicates professional responsibility to provide the best possible care to the public. Practitioners who under serve their clients can cite their graduation from an accredited program, and cite other practitioners who graduated from the same and similar programs in support of their clinical practice; i.e., this is how I and many other clinicians were taught to practice by faculty at an accredited clinical training program. Should choice of professional practices remain completely unfettered? Should maintaining traditions of clinical practice be a primary consideration? Should the bar for competent clinical practice be raised above these self-serving concerns?

All three arguments against ESTs just discussed miss or minimize the central ethical issue, to provide the best possible care to the public (cf. American Psychological Association, 2002 and supporting texts e.g., Fisher, 2003; Koocher & Keith-Spiegel, 2008). The foundational competency for reflective practice and self assessment considered below requires one to be aware of the literature pertinent to treated cases to facilitate professional development in order to best serve the public. The foundational competency for professionalism considered below requires integration of science and practice. The three lines of argument against ESTs discussed above fail to grasp this ethical issue. Are we not ethically bound to provide the best practices that the profession has to offer? If so, then what evidence shall we base our clinical practices on?

1.2.3 What Constitutes Evidence?

The second foundational competency considered below concerns scientific knowledge and methods. Its three facets are: (1) scientific mindedness, (2) applied knowledge, and (3) scientific foundations of clinical psychology. The fourth functional competency considered below pertains to research and evaluation and consists of two facets: (1) taking a scientific approach

to knowledge generation and (2) application of the scientific method to clinical practice. Competent psychologists are therefore informed about scientific methods and principles and base their practice upon them. These competency concepts bear directly upon the practice issues discussed in the prior section. It seems that one cannot be competent except that their practices are based on scientific evidence.

Although we frequently speak of science as an end product it is a method. While it is easy to criticize the contemporary science products upon which to base the professional practice of clinical psychology, as Levant (2004), Peterson (2004), and others have done, including the polarizing effects of McFall's (1996) manifesto (see Beutler, 2004), such limitations should not excuse or exempt psychologists from the responsibility to substantiate their diagnostic and therapeutic claims with sound empirical evidence. These limitations should motivate us to provide better evidence rather than to revise our methods downward to suit the types of theories and practices that we prefer (see Kettlewell, 2004). Beutler (2004) noted that "Like the poor marksman who corrects his problem by drawing a bull's eye around whatever place his arrow lands, if science doesn't give us the answers we want to our questions, Levant would have us change the definition of science until it includes procedures that give us the answers we want" (p. 227). Such methods serve to defend present practices and waste resources that could be put to better use. Hypotheses and theories should be supported or undercut by rigorous evidence; this includes long favored theories and practices. Such change is difficult, especially for older psychologists. "Seasoned" professionals are more likely to be committed to past practices as a justification for how they have spent their careers than are their younger colleagues who are still in a formative stage. Resistance to change is a human trait that needs to be struggled with rather than defended. Diluting the scientific method to where subjective judgments by therapists and clients are considered equally probative with investigations disciplined by the rigors of experimental design and statistical analysis may serve to protect present interests of some practicing psychologists but will ultimately devalue and discredit our profession. Our professional ethics prompt us to provide the best possible services to the public and to strive to improve the knowledge base that underpins these practices rather than to defend preferred practices by pointing out the faults of those who try to do better. Their errors should not constitute a pass to those who do not try at all. The first facet of the second functional competency considered below concerns knowledge of interventions that can alleviate suffering and promote health and well-being. This includes being able to cite empirical evidence that supports one's choice of interventions. The first three facets of the second functional competency considered below concerning intervention includes knowledge of empirically-based best practices and their inclusion in treatment planning. Competent clinical psychologists therefore seek to use the most effective interventions available.

Nathan and Gorman (2002; pp. v–vi) identified six levels of empirical support. Type 1 studies are based on random assignment, blinded assessment, clear inclusion and exclusion criteria, reliable and valid diagnostic and assessment methods, and adequate sample size to provide sufficient statistical power to detect group differences. Type 2 studies lack one or some of the criteria for Type 1 studies but are better designed than Type 3 studies. Type 3 studies typically entail open treatment pilot investigations and case control studies where treatment information is obtained retrospectively from treatment completers. Type 4 studies include reviews with secondary data analyses. Type 5 studies include reviews without secondary data analyses. Type 6 studies include case studies, essays, and opinion papers. Evidential criteria for being certified as an empirically supported treatment recognizes the role of single subject research

designs (http://www.apa.org/divisions/div12/cppi.html, http://www.apa.org/divisions/Div12/journals.html, http://www.psychology.sunysb.edu/eklonsky-/division12/, http://psy.ed.asu.edu/~horan/ced522readings/div12/chambless98.pdf).

1.2.4 Competency

While competency has always been of concern to clinical psychology faculty members, clinical competency has been emphasized by faculty at professional schools of psychology. Discussions concerning what constitutes clinical competency have recently increased. Kaslow (2004) considered core and foundational competencies in professional psychology. A new journal entitled *Training and Education in Professional Psychology* began publishing in 2006. A special section of *Professional Psychology*, 2007, Volume 38, Number 5, was devoted to competency issues. Rubin et al. (2007) provided a historical perspective on the competency movement within psychology. Nelson (2007) also provided a historical perspective on these issues. Kaslow, Rubin, Bebeau, et al. (2007) discussed 15 general principles and derivative recommendations for the assessment of competence. Leigh et al. (2007) discussed competency assessment models with examples from nursing, dentistry, medicine, and psychology. Lichtenberg et al. (2007) discussed challenges encountered during assessment of competencies. Manring, Beitman, and Dewan (2003) considered ways to evaluate competency in psychotherapy. Barber, Sharpless, Klostermann, and McCarthy (2007) addressed the issue of intervention competency. They distinguished between adherence and competence. Adherence concerns the ability to deliver the treatment as defined in a manual written by its originators. Competence concerns the ability to distinguish when to and not to administer a treatment. Elman and Forrest (2007) considered a broad range of professional development; one that extends from trainee impairment to professional competence. Overholser and Fine (1990) discussed managing subtle cases of clinical incompetence, whereas Brown, Lambert, Jones, and Minami (2005) discussed identifying highly effective therapists in a managed care environment. Kaslow, Rubin, Forrest, et al. (2007) wrote about recognizing, assessing, and intervening with problems of professional competence. Further information is available at: http://www.psychtrainingcouncils.org/.

This chapter seeks to identify characteristics that make for a competent clinician. One approach is to train and assess for competency for administering reliable and valid tests and implementing empirically supported interventions. It is easier to train students to competently administer, score, and interpret psychological tests than it is to competently administer psychological interventions. Some years ago there were over 250 different therapies to choose from (cf. Wamphold, 2001); now there are likely more therapies. It is unlikely that each of these interventions is unique and different. The presence of common factors including a working alliance characterized by accurate empathy, positive regard, nonpossessive warmth, and genuineness, is now well recognized (Lambert & Bergin, 1994, p. 164). Some therapies are trivially different from others and may not need to be learned. For example, one could add an inert component to an otherwise effective treatment and it would work just as well and therefore would pass all requirements to be listed as an empirically supported treatment. Rosen and Davison (2003) referred to such therapies as "Purple Hat" therapies based on their example of having a client wear a purple hat while undergoing exposure therapy for a phobia. The problem here is that proponents of such a therapy could attribute success to wearing the purple hat, charge therapists for workshops on the proper use of the hat in therapy, and to purchase an

official purple hat. Rosen and Davison (2003) recommend that empirically supported principles (ESPs) be listed instead of ESTs. Tryon (2005) identified a possible connectionist mechanism for why desensitization and exposure therapy work. Tryon and Misurell (2008) formulated a dissonance induction/reduction principle and connectionist mechanism to explain why effective therapies work.

Epstein and Hundert (2002) discussed basic competency as it pertains to medical practice and concluded that competency consists of Evidence-based Individual Decision Making (cf. Eddy, 2005). They emphasized acquisition and use of knowledge, a holistic and integrative approach to health care, the development of a therapeutic relationship, and that competence takes time to develop. Sackett, Rosenberg, Gray, Haynes, and Richardson (1999) stipulated that "Evidence based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research" (p. 71). Adequacy of basic competency can be evaluated against such a criterion.

The advent of professional schools of psychology set the occasion for new discussions regarding basic clinical competency and required training. The National Council of Schools of Professional Psychology (NCSPP), which was founded in 1974 as a support group, first met to discuss core curriculum issues in the summer of 1988 just before the APA convention and led to a series of training conferences. The first book was entitled *Quality in Professional Psychology Training: A National Conference and Self-Study* (Callan, Peterson, & Stricker, 1986); it reported on the Mission Bay conference. The second book was entitled *Standards and Evaluation in the Education and Training of Professional Psychologists: Knowledge, Attitudes, and Skills* (Bourg et al., 1987). The third book reported on the Puerto Rico conference and was entitled *Toward Ethnic Diversification in Psychology Education and Training* (Stricker et al., 1990). The fourth book entitled *The core curriculum in professional psychology* (cf. Peterson et al., 1991) reported on the San Antonio conference. Part I of this book addressed the core curriculum and general considerations. The first chapter discussed background issues (Peterson, 1991). The second chapter provided a critical history of efforts to develop a competency-based core curriculum (Weiss, 1991). It was noted that clinical training has largely been content-based rather than competency-based over more than the last 40 years as illustrated by the following six bases required by the American Psychological Association for accreditation: History and Systems, and five bases of behavior: Biological, Cognitive/Affective, Social, Individual, and Developmental. Hence, moving to competency-based training and evaluation marks a major change. Webbe, Farber, Edwall, and Edwards (1990) discussed the need for and nature of the academic-scientific core curriculum. They noted that the need for an academic-scientific core curriculum derives from the view that clinical practice entails applied psychology which means applied scientific psychology. Whereas master's level training might be restricted to testing and treatment manuals, doctoral level training entails the creative and flexible application of findings and principles of scientific psychology.

1.3   NCSPP Educational Model

The emphasis on clinical competency by training programs that primarily seek to prepare its graduates for service delivery is particularly appropriate. This section draws heavily on the

results of conferences and committees sponsored by the National Council of Schools and Programs of Professional Psychology. The complete core curriculum in professional psychology was described by Peterson et al. (1991). Individual chapters and/or the entire text can be downloaded from http://www.ncspp.info/core.htm. Peterson, Peterson, Abrams, and Stricker (1997) reported on the National Council of Schools and Programs of Professional Psychology educational model which contains the following six facets: (1) Relationship, (2) assessment, (3) intervention, (4) consultation and education, (5) management and supervision, and (6) research and evaluation. A final version of the "Competency Developmental Achievement Levels (DALs) of the National Council of Schools and Programs in Professional Psychology (NCSPP)" (http://www.ncspp.info/pubs.htm) added diversity. We now briefly consider each of these facets.

1.3.1　Relationship

The standards state that: "Relationship is the capacity to develop and maintain a constructive working alliance with clients and includes the ability to work in collaboration with others such as peers, colleagues, students, supervisors, and members of other disciplines, consumers of services, and community organizations. The relationship competency is the foundation and prerequisite of the other competencies" (p. 391). The DALs identified professional demeanor regarding self and others, interpersonal connection, cultural adaptability, and ethics as facets of relationship competency.

Establishing a good working alliance is the first and arguably most important psychotherapeutic step. Meta-analytic reviews by Horvath and Symonds (1991) and by Martin, Garske, and Davis (2000) have clearly established an association between a positive working alliance and good outcome. Bordin (1979) articulated the following three components of the working alliance: (1) agreement of treatment goals by client and therapist, (2) agreement on how to achieve those goals by client and therapist, and (3) the development of a personal relationship between the client and therapist. Horvath and Greenberg (1989) developed a Working Alliance Inventory for both the client and therapist. Tracey and Kokotovic (1989) and Tichenor and Hill (1989) created a short working alliance form that Andrusyna, Tang, DeRubeis, and Luborsky (2001) used to study the factor structure of working alliance with Cognitive Behavior Therapy with 94 patients from the Jacobson et al. (1996) study. Two rotated factors were interpreted. The first factor concerned agreement and confidence; the degree to which client and therapist agreed on goals and methods plus confidence that this approach would be successful. The second factor concerned the personal relationship or bond between the client and therapist.

1.3.2　Assessment

Peterson et al. (1997) reported that the standards maintain that assessment is "…an ongoing, interactive, and inclusive process that serves to describe, conceptualize, characterize, and predict relevant aspects of a client. The assessment process uses a multimethod and multitheory approach that takes into account the sociocultural context and that focuses not only on limitations and dysfunctions but also on competencies, strengths, and areas of effectiveness. Assessment is a fundamental process that is involved and interwoven with all other aspects of professional practice. In recent years the emphasis of assessment appropriately has shifted from

a narrow focus on tests, individuals, and psychopathology to a more comprehensive approach addressing a broader range of clients and client functions" (p. 392). The DALs identified psychological testing as one of the four domains of professional competency.

1.3.3   Intervention

Peterson et al. (1997) reported that the educational model conceptualizes intervention "…as activities that promote, restore, sustain, and/or enhance positive functioning and a sense of well-being in clients through preventive, developmental, and/or remedial services" (pp. 392–393). They did not further identify which interventions have been shown to accomplish these goals. The DALs identified intervention planning, intervention implementation, intervention evaluation, and ethics as facets of intervention competency. This chapter addresses these considerations in the background section where we discussed the following issues: (1) evidence-based medicine, (2) empirically supported treatments, and (3) what constitutes evidence.

   Diversity.   The DALs require one to identify and understand dimensions of diversity including, but not limited to age, gender, ethnicity, language, religion, disability, sexual orientation, and socio-economic status. Issues of power, privilege, and oppression are fundamental. Knowledge, skills, and attitudes pertain to five domains: (1) understanding how students identify and understand themselves and others, (2) understanding constructs of power, oppression, and privilege, (3) understanding the scientific and theoretical base of diversity, (4) ability to provide culturally competent services, and (5) integrating diversity issues into ethical decision making.

1.3.4   Consultation and Education

Peterson et al. (1997) reported that educational standards maintain that "Consultation refers to the planned collaborative interaction between the professional psychologist and one or more clients or colleagues, in relation to an identified problem area or program. Psychological consultation is an explicit intervention process that is based on principles and procedures found within psychology and related disciplines, in which the professional psychologist has no direct control of the actual change process. Psychological consultation focuses on the needs of individuals, groups, programs, or organizations. Education is the directed facilitation by the professional psychologist of the growth of knowledge, skills, and attitudes in the learner" (p. 393). The DALs identified knowledge of evidence-based theories, models, and interventions, integration of research and evaluation, problem-solving and intervention, performing consultation and education roles and building relationships, and ethical and knowledge of professional practices as facets of consultation/education competency.

1.3.5   Management and Supervision

Peterson et al. (1997) reported that "The Standards define management and supervision as follows: Management consists of those activities that direct, organize, or control the services of psychologists and others offered or rendered to the public. It includes knowledge about the business aspects of psychological practice and the laws, standards, and regulations affecting

practice. Supervision is a form of management blended with teaching in the context of relationship directed to the enhancement of competence in the supervisee" (p. 395). The DALs identified (1) assuring client and organizational welfare, (2) training/mentoring, (3) evaluation/gatekeeping, (4) ethics, and (5) health care leadership and advocacy as facets of management/supervision competency.

1.3.6 Research and Evaluation

Peterson et al. (1997) stated that competency includes: "(a) designing and critiquing approaches to systematic inquiry, using qualitative and quantitative methods; (b) analyzing data, using statistics, both descriptive and inferential, univariate and multivariate as well as methods appropriate to qualitative data; (c) conducting a scholarly project on a meaningful problem, typically associated with professional practice in psychology, with a strategy of disciplined inquiry appropriate to the problem" (p. 400). Doctoral programs that grant the Ph.D. spend more resources developing these skills than do programs that grant the Psy.D. The DALs identified (1) critical evaluation of research, (2) conducting and using research in applied settings, and (3) ethics and professional competency as facets of research/evaluation competency.

1.4   Foundational Competency Benchmarks

The final report of the 2006 American Psychological Association Task Force on The Assessment of Competence in professional Psychology (http://www.apa.org/ed/competency_revised.pdf) provided a general background and discussion of relevant issues including credentialing and specialization. An American Psychological Association Work Group published a *cube model* of competency benchmarks that specifies the essential component, behavioral anchors, and assessment methods for evaluating readiness for practicum, internship, and independent practice regarding the NCSPP educational model introduced above (cf., Rodolfa et al., 2005). Criteria specifying readiness for practicum and internship pertain to basic competencies. The criteria specifying readiness for practice, including independent private practice, pertain to expert competency. I preserve this developmental sequence to enhance continuity. This document can be retrieved at http://www.psychtrainingcouncils.org/pubs/Comptency%20Benchmarks.pdf or at http://wsm.l Feb_2007.pdf. The remainder of this section relies heavily on the cube model. A revised version of the "Competency Developmental Achievement Levels (DALs) of the National Council of Schools and Programs in Professional Psychology (NCSPP)" approved at the NCSPP Summer Conference Business Meeting on August 15, 2007 can be retrieved from http://www.ncspp.info/pubs.htm. A separate short section concerning expert competency follows.

Pages 11–33 of the cube model (cf. Rodolfa et al., 2005) concern the following core *foundational competencies*: (1) reflective practice and self-assessment, (2) scientific knowledge and methods, (3) relationships, (4) ethical and legal standards and policies, (5) individual and cultural diversity, and (6) interdisciplinary systems. It is unclear if the order reflects importance or if all six functional competencies are considered to be equally important. An essential component and behavioral anchors are provided for each of the following three developmental levels for each competency: (1) readiness for practicum, (2) readiness for internship, and (3) readiness for practice.

1.4.1   Reflective Practice and Self-Assessment

This foundational competency concerns practicing within the boundaries of one's competencies and a commitment to lifelong learning, scholarship, critical thinking, and the development of the profession. It consists of the following three facets: (1) reflective practice, (2) self-assessment and self care, and (3) professionalism.

1.4.1.1 Reflective Practice

The essential component that indicates readiness for *practicum* is self-awareness and a willingness to critically examine one's positions and practices. Behavioral anchors include: critical thinking, problem solving skills, intellectual curiosity and flexibility and the ability to self-examine and disclose. Assessment methods include performance in seminars plus written papers and proposals, and faculty judgments. The essential component that indicates readiness for *internship* is a broadened self-awareness. Behavioral anchors include being able to articulate attitudes, values and beliefs on a variety of topics including issues of diversity and being able to see and understand how peers and supervisors see them. Assessment methods include direct observation of professional activities by a supervisor either live or recorded, use of peer and self-assessment instruments and faculty and supervisor evaluations. The essential component that indicates readiness for *practice* is spontaneous reflection used as a therapeutic tool. Behavioral anchors demonstrating readiness for professional practice include regular monitoring of oneself and actions, accurate awareness of strengths and areas in need of improvement, and an understanding of how to practice within ones scope of competence. Assessment methods include client, supervisor, peer, and self-evaluations.

1.4.1.2 Self-assessment and Self-care

The essential component that indicates readiness for practicum includes a knowledge of core competencies and the beginnings of self-assessment regarding competencies and an understanding of the importance of self-care in professional practice. Behavioral anchors include a willingness to consider one's own motives, attitudes, and behaviors as they affect other people, a basic awareness of the need for self-care, and an awareness of the required clinical competencies. Assessment methods include self, peer, and supervisor evaluations based on direct observation or from taped sessions. The essential component that indicates readiness for internship includes accurate self-assessment that derives from self-monitoring and a willingness to acknowledge and correct errors. Behavioral anchors include effective use of feedback, working on self-monitoring with supervisors, writing a personal statement of professional goals as a draft for the APPI application, systematically reviews one's professional development through videotape or other technology. Assessment methods include self, peer, and supervisory evaluations based on direct observation or review of videotapes. The essential component that indicates readiness for practice includes the ability to accurately critique one's own performance and to spontaneously self-correct as necessary. Behavioral anchors include systematically reviewing one's own performance and making changes in one's professional activities based on self-monitoring. Assessment methods include supervisor evaluations, a review of interactions with clients, and attendance at professional meetings.

1.4.1.3 Professionalism

The essential component that indicates readiness for practicum includes an initial understanding of what it means to be a professional and to begin thinking like a psychologist. Behavioral anchors include: being organized and on time, demonstrates appropriate personal hygiene and dress, membership in professional organizations, demonstrates the need to practice within one's competence and understands what the core competencies entail. Assessment methods include self, peer, and faculty judgments with an emphasis on consensual validation. The essential component that indicates readiness for internship is an emerging professional identity as a professional psychologist who uses the published literature and supervision for professional development. Behavioral anchors include attendance at colloquia, workshops, and conferences, can summarize relevant literature regarding assigned cases, documents case meetings in progress notes, actively participates in supervision, and demonstrates an awareness of the impact they have on clients. Assessment methods include self, peer, and faculty evaluations, attendance at colloquia, seminars, and professional meetings. The essential component that indicates readiness for practice is the ability to integrate science and practice as part of a consolidated professional identity. Behavioral anchors include continuing education to keep up with advances in the profession, contributing to professional organizations, and awareness of the impact one's behavior has on the public and their perception of professional psychologists. Assessment methods include supervisor evaluations, performance on comprehensive doctoral examinations, attendance at professional meetings, and multi-method review of client interactions.

1.4.2 Scientific Knowledge-Methods

This foundational competency pertains to one's ability to one's understanding of research methods, including methods of data collection/analysis, and the biological bases of behavior as well as the cognitive-affective bases of behavior. The educational standards distinguish three components: (1) scientific mindedness, (2) scientific knowledge, and (3) scientific foundations.

1.4.2.1 Scientific Mindedness

The essential component that indicates readiness for practicum is critical scientific thinking. Behavioral anchors include the ability to critically review scientific publications which includes evaluating their assumptions, methodology, results, and conclusions. Assessment methods include performance in courses and seminars, presentations by faculty and peer reviews. The essential component that indicates readiness for internship is the application of scientific values and methods to professional practice. Behavioral anchors include discussions concerning case formulations as case conferences and ability to critique related scientific literature. Assessment methods include faculty, supervisor, peer, and self-ratings. The essential component that indicates readiness for practice is the independent application of scientific methods to practice. Behavioral anchors include the habitual use of scientific methods and the willingness to present one's work to others for evaluation. Assessment methods include the Examination for Professional Practice in Psychology (EPPP), portfolio reviews, and supervisor evaluations.

1.4.2.2 Scientific Knowledge

The essential component that indicates readiness for practicum is understanding psychology as a science. Behavioral anchors include the ability to cite scientific literature in support of an argument and the ability to evaluate scholarly literature. Assessment methods include performance in undergraduate course work, performance in graduate courses and seminars, and faculty ratings. The essential component that indicates readiness for internship is knowledge of core psychological science. Behavioral anchors include a demonstration of such knowledge and respect for the scientific bases of behavior. Assessment methods include successful performance in course work and on comprehensive examinations. The essential component that indicates readiness for practice is additional knowledge of core psychological science. Behavioral anchors include a demonstration of knowledge of and respect for the scientific bases of behavior as a foundation for clinical practice. Assessment methods include performance on the EPPP exam, case presentations, portfolios, and supervisor ratings.

1.4.2.3 Scientific Foundation

The essential component that indicates readiness for practicum is understanding the scientific foundation of professional practice. Behavioral anchors include understanding the development of evidence-based practice, understanding core science issues regarding human behavior, ability to cite scientific literature to support an argument and the ability to evaluate scientific studies. Assessment methods include performance in undergraduate course work, performance in graduate courses and seminars, and faculty ratings. The essential component that indicates readiness for internship is an understanding of and ability to apply concepts of evidence-based practice (EBP: see background comments about this issue above). Behavioral anchors include application of EBP concepts to case conceptualization and treatment planning plus comparing EPB approaches with other theoretical perspectives in the context of case formulation and treatment planning. Assessment methods include self-assessments, supervisory ratings, direct observation of professional activities, and either live or recorded, and successful performance on comprehensive examinations. The essential component that demonstrates readiness for practice is knowledge, understanding, and independent application of scientific knowledge to clinical practice. Behavioral anchors include reviews of scholarly literature related to clinical work, application of EBP concepts in practice, ability to compare and contrast EBP approaches with other theoretical perspectives in case conceptualization and treatment planning. Assessment methods include self-assessment, review of cases at case conference, supervisor ratings, and direct observation of professional activities, either live or recorded.

1.4.3 Relationships

This foundational competency pertains to one's ability of relate effectively and meaningfully with individuals, groups, and/or elements of the larger community. This competency is seen to include the following four facets: (1) interpersonal relationships, (2) affective skills, (3) interdisciplinary relationships, and (4) expressive skills. We consider each of these facets next.

1.4.3.1 Interpersonal Relationships

The essential component of that indicates readiness for practicum concerns interpersonal skills. Behavioral anchors include listening with empathy to others, showing respect for other cultures and the experiences of other people, and openness to feedback. Assessment methods include performance and behavior in courses, examination of performance during interviews, and faculty, peer, and self-evaluations. The essential component that indicates readiness for internship regarding relationships includes the ability to form and maintain respectful and productive relationships with clients, peers, colleagues, supervisors and other professionals. Behavioral anchors include forming a good working alliance with clients and supervisors plus involvement in departmental, institutional, and/or professional organizations. Assessment methods include working alliance ratings by clients, supervisor and peer ratings, direct observation of professional activities by a supervisor either live or via video tape or co-therapy. The essential component that demonstrates readiness for practice includes the ability to develop and maintain a good working alliance with a broad range of clients, colleagues, and work within professional organizations and the community. Behavioral anchors include maintenance of satisfactory relationships with clients, peers, and faculty and the ability to manage difficult conflicted relationships with individuals and groups that differ significantly from one's self. Assessment methods include self-evaluations and 360 evaluations.

1.4.3.2 Affective Skills

The essential component that indicates readiness for practicum concerns a rudimentary level of those skills. Behavioral anchors include tolerance of affect in oneself and others, tolerance and understanding of interpersonal conflict, tolerance of ambiguity and uncertainty, an awareness of one's own inner emotional experience, and emotional maturity. Assessment methods include self, peer, and faculty judgments with an emphasis on consensual validation. The essential component that indicates readiness for internship is the ability to constructively mediate conflict, negotiate differences of opinion, and receive constructive feedback from others including individual and group conferences. Behavioral anchors include working collaboratively with others, demonstrating active problem-solving, making appropriate self-disclosures, accepting and implementing supervisor recommendations in a nondefensive manner. Assessment methods include self, peer, and supervisory evaluations, direct observation by a supervisor or co-therapist. The essential component that indicates readiness for practice is possession of advanced interpersonal skills and the ability to manage difficult communication/relationships. Behavioral anchors include seeking clarification, demonstrating understanding of diverse view points and acceptance and implementation of constructive feedback from others. Assessment methods include self, peer, and supervisory evaluations and the extent to which the person seeks peer consultation and participates in professional activities.

1.4.3.3 Intradisciplinary Relationships

The essential component that indicates readiness for practicum concerns interdisciplinary respect. Behavioral anchors include respect for collegial interactions and professionals who

operate from a different perspective than their own. Assessment methods include course performance plus self-peer, and faculty ratings with an emphasis on consensual validation. The essential component that indicates readiness for internship is knowledge of professional relationships, norms, and culture. This includes the ability to establish and maintain appropriate professional attitude and boundaries. Behavioral anchors include adherence to ethical standards and institutional policies and procedures. Assessment methods include self, peer, client, staff, and supervisory ratings. The absence of negative reports is especially important. The essential component that indicates readiness for practice relationships is a clear understanding of professional boundaries plus an appreciation of individual and group differences including respect for one's self and for others. Behavioral anchors include adherence to ethical standards and institutional policies and procedures. Participation in local and national professional organizations is another positive indicator of readiness for practice. Assessment methods include self, peer, client, staff, and supervisory ratings. The absence of negative reports is especially important.

1.4.3.4 Expressive Skills

The essential component that indicates readiness for practicum concerns expressive skills themselves. Behavioral anchors include the ability to effectively communicate one's ideas and feelings both verbally and nonverbally. Assessment methods include performance in course work and at evaluation milestones during training. The essential component that indicates readiness for internship regarding expressive skills is the ability to express oneself in a clear and articulate way. Behavioral anchors include verbal, nonverbal, and written skills plus an understanding of professional language. Assessment methods include performance during class and evaluations by oneself, peers, and faculty members. The essential component that indicates readiness for practice regarding expressive skills is the articulate and eloquent command of both language and ideas. Behavioral anchors include a written and verbal command of language that enables clear and effective communication with clients. Assessment methods involve case presentations and supervisor evaluations.

1.4.4 Individual and Cultural Diversity

This foundational competency concerns one's awareness and sensitivity when working professionally with diverse individuals, groups, and communities. It consists of (1) self awareness and (2) knowledge application.

1.4.4.1 Self-awareness

The essential component that indicates for readiness for practicum entails self-awareness, knowledge, and an understanding of one's own ethnicity, gender, sexual orientation, race, and socioeconomic status as dimensions of diversity that may contrast with other individuals. Behavioral anchors include demonstration of such self knowledge by being able to articulate how ethnic group values influence how one related to other people. Assessment methods include performance in class prior to practicum. The essential component that indicates

readiness for internship includes the ability to monitor and apply knowledge of one's self during assessment, treatment, and consultation. Behavioral anchors include being able to understand and monitor one's own cultural identity while working with others and to effectively use feedback during supervision about diversity issues. Assessment methods include congruence among self, peer, and faculty evaluations. The essential component that indicates readiness for practice is the ability to independently monitor and apply knowledge about yourself as a cultural being during assessment treatment, and consultation. Behavioral anchors include the ability to independently articulate, understand, and monitor one's cultural identity while working with others and to be able to profit from supervision. Assessment methods include congruence among self, peer, and supervisory evaluations.

1.4.4.2 Knowledge Application

The essential component that indicates for readiness for practicum entails a basic knowledge of and sensitivity to scientific, theoretical, and contextual issues as the relate to the professional practice of psychology. Behavioral anchors include a demonstration of basic knowledge of the literature regarding individual and cultural diversity and demonstrating an understanding of diversity issues as they impact all aspects of professional psychology. Assessment methods include performance in small group experiences, course work, and peer review in addition to self, peer, and faculty ratings with an emphasis on consensual validation. The essential component that indicates for readiness for internship entails application of knowledge with sensitivity to issues of individual and cultural diversity during assessment, treatment, and consultation. Behavioral anchors include demonstrating knowledge of and APA policies regarding individual and cultural diversity, demonstrating the ability to address issues of diversity in professional settings, working effectively with diverse clients and colleagues, and demonstrating awareness of the effects that discrimination and privilege have on one's self and others. Assessment methods include direct observation of professional activities by a supervisor including co-therapy or review of videotape, client satisfaction surveys, client no-show and drop-out rates, self, peer, and supervisory evaluations of the extent to which diversity issues are included in case conceptualizations. The essential component that indicates for readiness for practice entails the application of knowledge, skills and attitudes regarding dimensions of diversity to the delivery of professional services. Behavioral anchors include the ability to articulate an integrated conceptualization of how dimensions of diversity impact one's own behavior and the behavior of clients including the ability to make appropriate adjustments to one's practice including seeking consultation when appropriate. Assessment methods include self-peer, and supervisor evaluations regarding case presentations and other work samples.

1.4.5   Ethical-Legal-Standards-Policy

The essential component of this foundational competency includes the application of ethical principles and awareness of legal issues to professional activities of individuals, groups, and organizations and advocating for the profession in various venues. It contains three facets: (1) knowledge, (2) awareness and application of an ethical decision making model, and (3) ethical conduct.

1.4.5.1 Knowledge

The essential component that indicates readiness for practicum concerns basic knowledge of the Ethical Principles and Code of Conduct published by the American psychological Association (2002) plus a rudimentary knowledge of legal and regulatory issues as they apply to the professional practice of psychology. Behavioral anchors include demonstrating one's knowledge through coursework and pre-practicum seminars, demonstrating knowledge of child abuse reporting, HIPAA regulations, confidentiality, and informed consent issues through written tests and discussions. Assessment methods include course performance and evaluations of decisions made in hypothetical situations. The essential component that indicates readiness for internship concerns a working knowledge and understanding of the APA Ethics Code along with other relevant ethical and professional codes, standards, laws, rules, and regulations that govern the professional practice of psychology. Behavioral anchors include ethical behavior, successful completion of coursework in ethics and the legal aspects of professional practice, the ability to effectively identify ethical dilemmas, the ability to seek and receive supervision regarding the ethical and legal aspects of professional case work, and recognition of the limits of one's own understanding of ethical and legal issues. Assessment methods include self, peer, and supervisory assessments based on co-therapy and live or recorded observation of clinical work plus the successful completion of the ethics section of comprehensive examinations. The essential component that indicates readiness for practice entails the routine command and application of the APA Ethics Code and all relevant legal and professional standards and guidelines that govern the professional practice of psychology. Behavioral anchors include spontaneous and reliable identification of complex ethical and legal issues and the ability to suggest constructive ways to proactively address and/or prevent them. It also includes awareness of the obligation to confront peers and organizations regarding unethical conduct and to suggest ways of proactively dealing with such matters. Assessment methods include the EPPP examination, state and provincial jurisprudence exams, client feedback, self- and supervisor evaluations.

1.4.5.2 Awareness and Application of Ethical Decision Making Model

The essential component that indicates readiness for practicum is recognition of the importance of ethical concepts, informed consent, confidentiality, conflict due to multiple relationships, competence, and child abuse reporting. Behavioral anchors include student and instructor discussions in class and clinical venues. Assessments include performance in courses and during clinical intervention including self-, peer, and faculty evaluations. The essential component that indicates readiness for internship is to be able to make ethical decisions in response to a dilemma. Behavioral anchors include the use of an ethical decision-making model when discussing cases during supervision and the ability of readily identify ethical implications in cases presented by others as well as in one's own cases. Assessment methods include self, peer, and faculty evaluations concerning clients seen, successful performance on written comprehensive examinations and oral evaluations that entail analysis of hypothetical cases. The essential component that indicates readiness for practice is commitment to and integration of ethics into all aspects of one's professional work. Behavioral anchors include inclusion of ethical issues in professional writings and presentations, in research designs and the treatment of participants, in teaching and training activities, and in consultation. Assessment

methods include self, peer, and supervisor evaluations, performance on state and provincial jurisprudence exams, performance on the EPPP examination, and performance during mock ethical dilemma/vignettes.

1.4.5.3 Ethical Conduct

The essential component that indicates readiness for practicum is that the candidate displays ethical attitudes and values. Behavioral anchors include the desire to help others, openness to new ideas, honesty and integrity, personal courage, and a capacity to manage limits. Assessment methods include self-, peer, and faculty judgments. The student should be able to admit errors and value intellectual honesty. The essential component that indicates readiness for internship is that the student displays knowledge of his or her own moral principles and ethical values. Behavioral anchors include being able to articulate one's own moral principles and ethical values in discussions with peers and supervisors. Assessment methods include self-, peer, and supervisor ratings, successful completion of ethics courses and component of comprehensive examinations and the ability to make ethical decisions. The essential component that indicates readiness for practice is that the candidate can independently and confidently behave consistently with ethical and legal standards. Behavioral anchors include integrating ethical issues and principles into their practice and taking responsibility for continued professional development in relation to ethical and legal standards and policies. Assessment methods include self, peer, and supervisor ratings, absence of complaints, and a willingness to serve professionally in the ethics arena.

1.4.6 Interdisciplinary Systems

The essential component of this foundational competency includes identification and involvement with one's colleagues and peers. It also includes knowledge of key issues and concepts in related disciplines plus the ability to interactive constructively with other professionals. This foundational competency consists of four facets: (1) Understanding the shared and distinctive contributions of other professions, knowledge of key issues and concepts, and concepts related to the work of other professionals, (2) multidisciplinary and interdisciplinary functioning which includes understanding the differences and ability to function in both contexts, (3) understanding how participation in interdisciplinary collaboration and consultation enhances outcomes, and (4) developing respectful and productive relationships with individuals from other professions.

Understanding the shared and distinctive contributions of other professions, knowledge of key issues and concepts, and concepts related to the work of other professionals. The essential component that indicates readiness for practicum is that the candidate has a basic knowledge of the viewpoints and contributions that professionals in other fields have made and make. Behavioral anchors include demonstrating knowledge of and valuing the roles, functions, and services provided by other professionals. Assessment methods include course performance and the pertinent component of comprehensive examinations. The essential component that indicates readiness for internship is an awareness of the multiple and differing views, roles, professional standards, and contributions made by various professionals. Behavioral anchors include reports based on observations of behaviors while working with professionals from other fields. Assessment methods include self, peer and supervisor evaluations based on direct observation

such as during co-therapy. The essential component that indicates readiness for practice is an informed knowledge of the multiple and differing views, professional standards, and contributions that other professionals have and make. Behavioral anchors include the ability to articulate the role that other professionals provide and working successfully on interdisciplinary teams. Assessment methods include self, peer, and supervisory evaluations.

Multidisciplinary and interdisciplinary functioning which includes understanding the differences and ability to function in both contexts. The essential component that indicates readiness for practicum is a basic understanding of the difference between interdisciplinary and multidisciplinary. Interdisciplinary refers to what professions share; to their common ground; to modifying their respective approaches in order to be more effective as a team (see http://en.wikipedia.org/wiki/Interdisciplinary). Multidisciplinary pertains more to the separate functions of differing disciplines. Behavioral anchors include demonstrating knowledge of these differences. Assessment methods include performance in courses, evaluations, and comprehensive exams. The essential component that indicates readiness for internship is an understanding of strategies that promote interdisciplinary and multidisciplinary collaboration. Behavioral anchors include demonstrating knowledge of what is involved in such professional relationships. Assessment methods include self, peer, and supervisory assessments. The essential component that indicates readiness for practice is the ability to display skills that support effective interdisciplinary team communication and functioning. Behavioral anchors include demonstrating these skills in clinical and other professional settings. Assessment methods include self-, peer, and supervisory evaluations including members of other professions.

Understands how participation in interdisciplinary collaboration and consultation enhances outcomes. The essential component that indicates readiness for practicum is knowledge about how interdisciplinary collaboration can facilitate reaching therapeutic goals. Assessment methods include self-, peer, and supervisory evaluations. The essential component that indicates readiness for internship is demonstrating an ability to participate constructively on an interdisciplinary team. Behavioral anchors include effective consultation and cooperation with professionals from other disciplines. Assessment methods include self-, peer, and supervisory evaluations including members of other professions. The essential component that indicates readiness for practice is the ability to work effectively with other professionals to reach shared goals. Behavioral anchors include evidence of systematic collaboration with other professionals. Assessment methods include self-, peer, and supervisory evaluations including members of other professions.

Respectful and productive relationships with individuals from other professions. The essential component that indicates readiness for practicum is an awareness of the benefits of forming collaborative relationships with other professionals. Behavioral anchors include expressing interest in developing collaborative relationships and demonstrating respect for other professionals. Assessment methods include self-, peer, and supervisory evaluations in addition to performance in course work. The essential component that indicates readiness for internship is an ability to develop and maintain collaborative relationships and respect for other professionals. Behavioral anchors include the ability to communicate effectively with other professionals. Assessment methods include self-, peer, and supervisory evaluations based on live observation and/or co-therapy or videotape review. The essential component that indicates readiness for practice is the ability to develop and maintain collaborative relationships over time despite differences in perspective. Behavioral anchors include the ability to communicate effectively with other professionals and to appreciate their contributions. Assessment methods include self-, peer, and supervisory ratings including members of other professions.

1.5 Functional Competency Benchmarks

Pages 34–62 of the American Psychological Association Work Group's cube model concerns the following core functional competencies: (1) assessment, diagnosis, and case conceptualization, (2) intervention, (3) consultation, (4) research and evaluation, and (5) supervision and teaching. An essential component and behavioral anchors are provided for each of the same three developmental levels; readiness for: (1) practicum, (2) internship, and (3) practice (see http://www.psychtrainingcouncils.org/pubs/Comptency%20Benchmarks.pdf or http://wsm.ezsitedesigner.com/share/scrapbook/50/502062/Benchmark_Competencies_Document_-_Feb_2007.pdf). A related statement of "Competency Developmental Achievement Levels (DALs) of the National Council of Schools and Programs in Professional Psychology (NCSPP)" can be retrieved from http://www.ncspp.info/pubs.htm.

1.5.1 Assessment-Diagnosis-Case Conceptualization

The essential component of this functional competency includes the ability to assess and diagnose problems and issues associated with individuals, groups, and/or organizations. It includes three major facets: (1) diagnosis, (2) assessment, and (3) integration.

1.5.1.1 Diagnosis

The diagnosis facet of the assessment-diagnosis-case conceptualization functional competency consists of two components: (1) understanding normal and abnormal behaviors and (2) diagnostic skills.

Understanding Normal and Abnormal Behaviors
The essential feature that indicates readiness for practicum consists of basic knowledge regarding the range of normal and abnormal behaviors. Behavioral anchors include being able to describe normal development and identify DSM criteria for various disorders. Assessment methods include performance in course work and evaluations of clinical work. The essential feature that indicates readiness for internship is the ability to apply concepts of normal and abnormal behavior to case formulations and diagnosis. Behavioral anchors include being able to describe clinical disorders. Assessment methods include performance in advanced coursework and supervisor evaluations. The essential feature that indicates readiness for practice is the ability to diagnose and formulate treatment planning for cases. Behavioral anchors include the development of treatment plans that incorporate relevant developmental features and clinical symptoms. Assessment methods include supervisor evaluations.

Diagnostic Skills
The essential feature that indicates readiness for practicum is basic knowledge regarding diagnosis, case conceptualization and treatment formulation. Behavioral anchors include the ability to discuss diagnostic and case formulations in an informed way. Assessment methods include performance in coursework and clinical evaluations. The essential feature that indicates readiness for internship is the ability to systematically gather data to inform clinical decision making.

Behavioral anchors include preparing reports that include sufficient information upon which to base a clinical diagnosis. Assessment methods include case presentation and conceptualization plus supervisor evaluations. The essential feature that indicates readiness for practice is the ability to independently and accurately conceptualize cases based on assessment results. Behavioral anchors include the ability to administer, score, and interpret tests, independently prepare reports based on actual client material, and to formulate a case conceptualization. Assessment methods include self-, peer, and supervisor evaluations.

1.5.1.2 Assessment

The assessment functional competency consists of two components: (1) knowledge of measurement and psychometrics, and (2) use of methods which include interview plus tests and other measurements.

Knowledge of Measurement and Psychometrics

The essential feature that indicates readiness for practicum includes a basic knowledge of the scientific and theoretical basis of test construction and interviewing. Behavioral anchors include an awareness of the benefits of standardized assessment, knowledge of the constructs being assessed, and an understanding of test development including reliability and validity. Assessment methods include performance during coursework and clinical evaluations. The essential feature that indicates readiness for internship includes the ability to select assessment measures on the basis of reliability and validity. Behavioral anchors include the ability to identify appropriate assessment measures for cases seen at a practice site and consultation with supervision regarding the selection of said measures. Assessment methods include performance on the assessment component of doctoral comprehensive examinations and supervisory evaluations. The essential feature that indicates readiness for practice includes the ability to independently select and implement multiple methods of evaluation in ways that are responsive to and respectful of individuals with diverse backgrounds. Behavioral components include cultural awareness and sensitivity, knowledge of norms for different populations, seeking consultation to guide assessment and an understanding of the limitations of assessment. Assessment methods include reviews of test reports and case presentations, supervisory evaluations, and performance on the relevant section of doctoral comprehensive examinations.

Use of Methods

This competency consists of the ability to interview and to use tests and measurements. The essential feature pertinent to interviewing that indicates readiness for practicum includes knowledge of the models and techniques of clinical interviewing including administration of the mental status exam. Behavioral anchors include knowledge of both structured and semi-structured interviews, the mini mental status exam, goal planning relationship building, and treatment planning. Assessment methods include performance in coursework and supervisory evaluations. The essential feature that indicates readiness for internship includes knowledge of the principles and practices of systematic interviewing, data gathering, and the ability to integrate and interpret the data collected. Behavioral anchors include collecting accurate and relevant data from structured and semi-structured interviews and mini-mental status exams, the ability to write reports that synthesize these data, and consultation with supervisors. Assessment

methods include in vivo observations, and supervisory evaluations. The essential feature that indicates readiness for practice includes the ability to independently use the clinical interview to diagnose and formulate treatment planning. Behavioral anchors include collecting accurate and relevant data from structured and semi-structured interviews and mini-mental status exams and the ability to write integrative reports based on these data that culminate in a treatment plan. Assessment methods include in vivo observation and supervisory review.

The essential feature of the use of methods component pertinent to *tests and measurements* that indicates readiness for practicum includes basic knowledge regarding the administration and scoring of traditional assessment measures. Behavioral anchors include the accurate administration and scoring of assessment tools as part of coursework. Assessment methods include course grades. The essential feature that indicates readiness for internship includes awareness of the strengths and limitations regarding the administration, scoring, and interpretation of traditional and newer assessment measurements. Behavioral anchors include proper selection, administration, and interpretation of assessment tools and seeking appropriate supervision. Assessment methods include supervisor evaluations. The essential feature that indicates readiness for practice includes the ability to independently understand the strengths and limitations of diagnostic methods and to properly interpret the results for purposes of diagnosis and treatment planning. Behavioral anchors include appropriate selection of assessment tools, writing comprehensive reports that include limitations of assessment methods, and seeking appropriate supervision. Assessment methods include supervisory ratings of written reports and case presentations.

1.5.1.3 Integration

The integration functional competency consists of three facets: (1) site specific functions, (2) communication of results, and (3) integrated skills.

Site Specific
The essential component that indicates readiness for practicum includes knowledge of the similarity and differences in assessment methods across practice sites. Behavioral anchors include awareness of the need to select assessment measures that are appropriate to the client, assessment site, and primary problem. Assessment methods include clinical case vignettes. The essential component that indicates readiness for internship includes knowledge of assessment tools that are appropriate to one's training site. Behavioral anchors include the ability to select assessment tools that reflect the patient population being served at a specific practice site and seeking supervision. Assessment methods include supervisor evaluations. The essential component that indicates readiness for practice includes independent selection and administration of assessment tools that are appropriate to the practice site and to the assessment question. Behavioral anchors include independently selecting appropriate assessment tools. Assessment methods include supervisor evaluations of written reports and case presentations.

Communication of Results
The essential component that indicates readiness for practicum includes basic knowledge of measurements concerning different domains of functioning. Behavioral anchors include awareness to base diagnosis on multiple assessments and sources. Assessment methods include course performance. The essential component that indicates readiness for internship includes

being able to select appropriate assessment measures to answer diagnostic questions. Behavioral anchors include having done so and seeking supervision. Assessment methods include satisfactory performance on the assessment component of doctoral comprehensive exams and supervisory evaluations regarding report writing. The essential component that indicates readiness for practice includes the ability to independently select and use a variety of assessment methods and integrate their results into a written report that accurately evaluates the presenting problem. Behavioral anchors include the ability to interpret assessment results accurately accounting for the limitations of the evaluation methods used, the ability to provide accurate client feedback, and seeking supervision as needed. Assessment methods include supervisory evaluations of written reports and case presentations.

Integrated Skills

The essential component that indicates readiness for practicum includes basic knowledge concerning measurement across multiple domains of functioning. Behavioral anchors include awareness of the need to base diagnosis on multiple assessment sources. Assessment methods include performance in coursework. The essential component that indicates readiness for internship includes the ability to select appropriate assessment measures designed to answer specific diagnostic questions. Behavioral anchors include the ability to independently select and use appropriate assessment and diagnostic measures and seeking supervision on a routine basis. Assessment methods include the relevant section of doctoral comprehensive examinations and supervisory evaluations of integrated report writing. The essential component that indicates readiness for practice includes the ability to independently select and use a variety of assessment measures and to integrate the results into a report that accurately evaluates the presenting problem. Behavioral anchors include the ability to properly interpret assessment results taking into account relevant limitations of the evaluation method and the ability to provide understandable and useful feedback that is responsive to the client's needs, and to seek supervision when needed. Assessment methods include self-, peer, and supervisory evaluations of case presentations.

1.5.2   Intervention

The intervention functional competency concerns selection and application of interventions designed to alleviate suffering and to promote health and well being of clients, groups, and/or organizations. This functional competency consists of five facets: (1) knowledge of interventions, (2) intervention planning, (3) intervention implementation, (4) progress evaluation, and (5) skills.

1.5.2.1 Knowledge of Interventions

The essential component that indicates readiness for practicum includes knowledge of the basic scientific, theoretical and contextual bases of interventions and the value of evidence-based practice. Behavioral anchors include the ability to articulate the relevance of the science of psychology to evidence based practice including both its strengths and weaknesses for different populations and clinical settings. Assessment methods include course performance. The essential component that indicates readiness for internship includes knowledge of the theoretical and scientific bases of interventions. Behavioral anchors include writing a statement

of one's theoretical perspective, presentation of work with clients that demonstrates their understanding of evidence-based practice. Assessment methods include performance on doctoral comprehensive examinations, performance during case presentations, and supervisory evaluations. The essential component that indicates readiness for practice includes an ability to apply evidence-based practice in a clinical setting. Behavioral anchors include providing empirical support one's choice of intervention, demonstrating sufficient skill to implement the intervention, and writing a case summary that specifies the evidence that supports the chosen intervention. Assessment methods include performance during case presentations and evaluations by supervisors and clients.

1.5.2.2 Intervention Planning

The essential component that indicates readiness for practicum includes a basic understanding of the relationship between assessment and intervention. Behavioral anchors include the ability to state how intervention choices are informed by assessment results. Assessment methods include course work performance and faculty judgments. The essential component that indicates readiness for internship includes the ability to formulate treatment plans from at least one theoretical orientation. Behavioral anchors include the ability to state a theory of change, to identify procedures for bringing about that change, to writing a report of one's plan including the evidence upon which it is based. Behavioral anchors include the ability to describe a theory of change and procedures for achieving those changes, writing an understandable case conceptualization report, and successful completion of the intervention component of doctoral comprehensive examinations. Assessment methods include doctoral examination results, supervisory evaluations, and quality assurance reviews. The essential component that indicates readiness for practice includes the ability to independently plan and implement case formulations based on empirical evidence. Behavioral anchors include accurate assessment of the presenting problem with sensitivity to dimensions of diversity. Assessment methods include self-, peer, and supervisory evaluations and performance during case presentations and portfolio review.

1.5.2.3 Intervention Implementation

There are no essential components for this competency that indicates readiness for practicum. Students are not expected to be skilled in this regard at this stage of their training. The essential component that indicates readiness for internship includes the ability to implement evidence-based interventions with sensitivity to dimensions of client diversity and treatment context. Behavioral anchors include the ability to apply specific evidence-based interventions and write reports documenting the results of intervention. Assessment methods include supervisory ratings consistent with readiness for internship. The essential component that indicates readiness for practice includes the ability to implement interventions based on empirical evidence and to adapt these interventions where appropriate. Behavioral anchors include the ability to independently and effectively implement a variety of empirically-based interventions, to terminate treatment successfully, and to collaborate effectively with other care providers. Assessment methods include self-, peer, and supervisory evaluations, client satisfaction, and outcome measures.

1.5.2.4 Progress Evaluation

The essential component that indicates readiness for practicum includes basic knowledge of how assessments are conducted to evaluate progress and outcome. Behavioral anchors include demonstrating basic knowledge concerning available methods to assess the outcome of interventions. Assessment methods include course work performance and faculty judgments. The essential component that indicates readiness for internship includes the ability to evaluate treatment progress and to modify treatment planning as indicated by the results of outcome measures, especially when progress is slow or nonexistent. Assessment methods includes self-, peer, and supervisory evaluations plus results of assessment measures. The essential component that indicates readiness for practice includes the ability to independently evaluate treatment progress and outcome and to modify treatment planning and interventions accordingly. Behavioral anchors include the ability to independently assess treatment effectiveness and efficiency and the evaluate one's performance in the treatment role and willingness to consult as the need arises.

1.5.2.5 Skills

The essential component that indicates readiness for practicum includes basic helping skills. Behavioral anchors include demonstrations of these skills including emphatic listening and framing problems. Assessment methods include simulations and/or role playing in courses, self-, peer, and faulty evaluations. The essential component that indicates readiness for internship includes effective clinical skills. Behavioral anchors include the ability to develop rapport and a good working alliance with most clients, and the effective use of supervision. Assessment methods include case observations and presentations plus supervisor and client evaluations. The essential component that indicates readiness for practice includes effective clinical skills. Behavioral anchors include the ability to develop rapport and a good working alliance with a wide variety of clients and the use of good judgment about unexpected issues including crises and the effective use of supervision. Assessment methods include case observations and presentations plus supervisor and client evaluations.

1.5.3   Consultation

The third functional competency is consultation; being able to provide expert guidance and/or assistance as requested. Consultation consists of the following three facets: (1) addressing the referral question, (2) role knowledge, and (3) knowledge.

1.5.3.1 Addressing the Referral Question

No expectation indicates readiness for practicum. The essential component that indicates readiness for internship includes knowledge of and the ability to select appropriate assessment methods to address referral questions. Behavioral anchors include the ability to systematically collect data in a consultative role. Assessment methods include supervisor evaluations and performance on the relevant portion of doctoral comprehensive examinations. The essential

component that indicates readiness for practice includes the ability to select contextually sensitive assessment methods and other data gathering methods to address the referral questions. Behavioral anchors include clarifying and refining the referral question based on collected data. Assessment methods include supervisor evaluations and case presentations.

1.5.3.2 Role Knowledge

No expectation indicates readiness for practicum. The essential component of that indicates readiness for internship includes understanding how the consultant's role differs from that of other professional roles such as therapist, supervisor, and teacher. Behavioral anchors include the ability to compare and contrast the roles of consultant, therapist, supervisor, and teacher. Assessment methods include supervisor ratings and performance on the relevant sections of doctoral comprehensive examinations. The essential component that indicates readiness for practice includes the ability to determine which situations require consultation. Behavioral anchors include the ability to detect when consultation is appropriate and to be able to effectively shift among different professional roles. Assessment methods include consultee feedback and supervisor evaluations.

1.5.3.3 Knowledge

No expectation indicates readiness for practicum. The essential component that indicates readiness for internship includes the ability to identify and acquire publications pertinent to the consultee and their issues. Behavioral anchors include performance in relevant coursework and the ability to identify components of a consultation report. Assessment methods include performance in relevant coursework and supervisor evaluations. The essential component that indicates readiness for practice includes the ability to apply findings from published literature to both routine and complex cases as a consultant. Behavioral anchors include the ability to prepare useful consultation reports and to clearly communicate their contents to all appropriate parties. Assessment methods include case presentations, consultee feedback, and supervisor evaluations.

1.5.4   Research Evaluation

This fourth functional competency concerns the ability to generate and evaluate research that contributes to the scientific basis for professional practice and to evaluate the effectiveness of professional activities. This functional competency has the following two facets: (1) scientific approach to knowledge generation, and (2) application of the scientific method to practice.

1.5.4.1 Scientific Approach to Knowledge Generation

The essential component that indicates readiness for practicum includes critical thinking and scientific mindedness. Behavioral anchors include an understanding of the contribution that research makes to the professional knowledge base, an understanding that psychologists

evaluate the effectiveness of their professional activities, and an openness to inspection and evaluation of one's work. Assessment methods include coursework performance, self-, peer, and faculty evaluation with emphasis on consensual validation. The essential component that indicates readiness for internship includes the ability to apply research skills to evaluate principles and practices of professional psychology. Behavioral anchors include successful completion of master's thesis, doctoral dissertation, relevant section of doctoral comprehensive examination, and other research and scholarship activities. Assessment methods include comprehensive exams, research requirements, and faculty evaluations. The essential component that indicates readiness for practice includes the generation of knowledge. Behavioral anchors include engaging in research to answer a basic or applied question. Assessment methods include a review of manuscripts and/or reprints of publications and/or a portfolio review.

1.5.4.2 Application of Scientific Method to Practice

No expectation indicates readiness for practicum. The essential component that indicates readiness for internship includes the application of scientific methods to evaluate one's own professional practice. Behavioral anchors include discussions of evidence-based practices, data collection on one's own clients, and participation in program evaluation. Assessment methods include supervisor and faculty evaluations. The essential component that indicates readiness for practice includes the evaluation of outcomes. Behavioral anchors include evaluating progress and/or outcomes of professional activities. Assessment methods include supervisor evaluations.

1.5.5   Supervision and Teaching

This fifth functional competency consists of the following three major facets: (1) supervision, (2) teaching, and (3) management-administration skills. The supervision facet contains the following five components: (1) knowledge, (2) skills development, (3) awareness of factors affecting quality, (4) participation in the supervisory process, and (5) ethical and legal issues. We now consider each of these elements.

1.5.5.1 Supervision

The essential feature of the knowledge component of the supervision facet that indicates readiness for practicum includes a basic knowledge of what to expect during supervision. Behavioral anchors include demonstrating knowledge of supervision including student role and responsibilities, setting goals for supervision with respect to the practicum setting. Assessment methods include self-, peer, and faculty ratings, and performance in related coursework. The essential feature that indicates readiness for internship includes knowledge of the purpose, roles, and goals of supervision. Behavioral anchors include successful completion of supervision coursework, practicum placements, and relevant portions of doctoral comprehensive examinations. Assessment methods include course grades, practicum supervisor evaluations, and doctoral comprehensive examinations. The essential feature that indicates readiness for

practice includes understanding the complexity of the supervisory process including pertinent ethical and legal issues. Behavioral anchors include the ability to articulate a philosophy and/or model of supervision and to reflect on how this model is applied in practice. Assessment methods include peer and supervisor feedback.

There are no expectations regarding the *skills development* component of the supervision facet that indicates readiness for practicum. The essential feature that indicates readiness for internship includes knowledge of the literature on supervision and how clinicians develop into skilled professionals. Behavioral anchors include successful completion of supervision coursework and the successful completion of relevant sections of doctoral comprehensive examinations. Assessment methods include coursework and doctoral comprehensive examinations. The essential feature that indicates readiness for practice includes reflection regarding one's clinical relationships with supervisees and their relationships with their clients. Behavioral anchors include being able to clearly articulate how to use supervisory relationships to help supervisees more effectively treat their clients. Assessment methods include peer and supervisory feedback.

The essential feature of the *awareness of factors affecting quality* component of the supervision facet that indicates readiness for practicum includes a basic knowledge of and sensitivity to dimensions of diversity as they relate to supervision. Behavioral anchors include demonstrating a basic knowledge of the literature on supervision and how dimensions of diversity impact supervision. Assessment methods include performance during coursework and self-, peer, and faculty supervisor evaluations. The essential feature that indicates readiness for internship includes knowledge of how dimensions of diversity impact supervision. Behavioral anchors include discussions during case presentations, familiarity with the literature on supervision, understanding how privilege and oppression can arise during supervision, and completion of cases under supervision. Assessment methods include self-, peer, and faculty evaluations based upon supervisory experience. The essential feature that indicates readiness for practice includes an understanding of how dimensions of diversity impact the supervisory process and the ability to reflect on one's performance in supervision. Behavioral anchors include a demonstration of sensitivity to diversity dimensions during supervision over multiple cases. Assessment methods include self-, peer, and supervisor evaluations of case presentations.

The essential feature of the *participation in the supervisory process* component of the supervision facet that indicates readiness for practicum includes awareness of the need for honest and respectful communication during supervision. Behavioral anchors include a willingness to admit mistakes and to accept constructive feedback. Assessment methods include self-and supervisor evaluations. The essential feature that indicates readiness for internship includes observation of and participation in supervision with peers and faculty. Behavioral anchors include successful completion of supervision related coursework and the successful completion of relevant portions of doctoral comprehensive exams. Assessment methods include coursework and doctoral comprehensive examinations. The essential feature of that indicates readiness for practice includes the ability to independently provide supervision to others. Behavioral anchors include evidence of having provided supervision to advanced students, peers, and/or other providers. Assessment methods include reviews of video or audio tapes of supervision and feedback from the supervisee.

The essential feature of the *ethical and legal issues* component of the supervision facet of the that indicates readiness for practicum includes a knowledge of ethical principles of practice and a knowledge of pertinent legal and regulatory issues regarding supervision. Behavioral anchors include demonstrating an understanding of this knowledge as codified in the APA

(2002) ethics code. Assessment methods include performance in pre-practicum coursework and a practicum readiness interview. The essential feature that indicates readiness for internship includes a knowledge of and compliance with the APA (2002) ethics code and institutional standards and guidelines for the practice site. Behavioral anchors include behaving ethically, recognizing ethical/legal issues and dilemmas in clinical practice, and bringing these matters to their supervisor's attention. Assessment methods include direct observation of supervisees during service delivery, during case conferences, and during supervision. The essential feature that indicates readiness for practice includes a command of ethical, legal, and professional standards and evidence of their effective application. Behavioral anchors include spontaneously identifying complex ethical and legal issues during supervision and developing proactive solutions plus awareness of potential conflicts of interest that may arise during supervision. Assessment methods include self-evaluations and reports by supervisors.

1.5.5.2 Teaching Skills

This facet of the supervision-teaching functional competency concerns teaching skills. The essential feature that indicates readiness for practicum includes an awareness of contemporary theories of learning and how they impact teaching. Behavioral anchors include the ability to detect differences in learning styles and to provide appropriate learning experiences. Assessment methods include classroom observation and course evaluations. The essential feature that indicates readiness for internship includes knowledge of didactic learning strategies and how to accommodate individual differences in how people learn. Behavioral anchors include clear communication skills and accommodation to individual developmental differences. Assessment methods include observation of peer teaching sessions and observation and rating of one's didactic teaching class. The essential feature that indicates readiness for practice includes an evaluation of the effectiveness of learning and teaching strategies used. Behavioral anchors include demonstration of a strategy to evaluate teaching effectiveness of targeted skill sets, articulation of concepts to be taught and the research evidence that supports these concepts, and demonstrating a strategy to assess if learning objectives have been met. Assessment methods include observation and review of teaching in addition to course evaluations.

1.5.5.3 Management and Administration

This sixth and final functional competency consists of the following three major facets: (1) leadership, (2) management, and (3) effective program development.

Leadership

No expectation indicates readiness for practicum. The essential feature of that indicates readiness for internship includes a basic understanding of leadership and management. Behavioral anchors include an understanding of quality assurance procedures in the direct delivery of services and to understand the responsibilities, challenges, and management processes that are involved in quality assurance. Assessment methods include written quarterly evaluations and passing the HIPAA continuing education module. The essential feature that indicates readiness for practice includes a demonstration of leadership skills and abilities, business knowledge, and

management and supervisory skills needed for quality assurance. Behavioral anchors include the ability to develop a system for evaluating staff/employees, ability to communicate effectively with all parties, ability to provide direction to others, identify opportunities for quality improvement, and identify necessary resources to develop a business plan. Assessment methods include written quarterly evaluations and developing all necessary materials to comply with HIPAA in the Department of Developmental Services and/or OPA.

Management

No expectation indicates readiness for practicum. The essential feature that indicates readiness for internship includes a basic knowledge of and ability to effectively function within professional settings and organizations. Behavioral anchors include the ability to articulate organizational policies and procedures. Assessment methods include written quarterly reports and supervisory evaluations. The essential feature that indicates readiness for practice includes the ability to manage the direct delivery of professional services. Behavioral anchors include evidence that one can independently manage and evaluate the delivery of professional services and can respond promptly to organizational demands and can participate in the development of policies. Assessment methods include documentation of such activities and reviews by credentialing or by state, federal or private review boards.

Effective Program Development

No expectation indicates readiness for practicum. The essential feature that indicates readiness for internship includes recognition of one's role in creating policies, participating in system change and the management process. Behavioral anchors include discussions with supervisors and agency representatives. Assessment methods include written quarterly evaluations and supervisory evaluations. The essential feature that indicates readiness for practice includes awareness of principles of the OPA principles and policy manual. Behavioral anchors include being able to provide others with face to face and written evaluations and direction. Assessment methods include records of periodic reports of meetings with supervisees.

1.5.6   Becoming Expert

This chapter has taken the position that one must become expert prior to practicing professional psychology independently. These characteristics have been described in the preceding section that detailed foundational and functional competencies. Hatcher and Lassiter (2007) published a *Practicum Competencies Outline* that distinguishes three levels of competence, novice, intermediate, and advanced, with respect to two domains of functioning: (1) baseline competencies concerning skills, attitudes, and knowledge that students should have to be ready for practicum and (2) competencies that are developed during practica. These features are generally consistent with the characteristics outlined above for readiness for practicum.

Hatcher and Lassiter (2007) modified the definitions of five stages of professional developed introduced by Dreyfus and Dreyfus (1986) who modified material provided by Benner (1984). *Novice* is the first stage and is characterized by a limited knowledge and understanding of how to assess and intervene. The novice does not discern differentiate between important and unimportant information. The novice seeks and follows rules to guide assessment

and intervention. *Intermediate* is the second stage. Students at this level recognize important clinical features and can select appropriate interventions. *Advanced* is the third stage. Students display a deeper and more integrated knowledge of clinical patterns and appropriate interventions. They better integrate their professional practice with the science base of their profession. *Proficient* is the fourth stage. Pattern recognition and completion is prominent here. Pattern completion is the ability to reconstruct the whole given a part. The psychologist rapidly grasps the presenting situation as a whole rather than the sum of disparate parts. This holistic understanding facilitates decision making regarding diagnosis and intervention. *Expert* is the fifth stage. Pattern recognition and completion reaches a peak here. A psychologist at this stage no longer relies on rules per se but is guided by an intuitive grasp of the presenting situation and therefore rapidly focuses on the relevant factors and readily formulates treatment plans.

In general, beginners tend to be rule based and rule bound in their application of knowledge; following a more step-by-step approach whereas experts tend to be pattern recognizers and completers where they rapidly understand the situation at hand and apply their knowledge and skills accordingly. Assessment become increasingly "obvious" to the expert and intervention becomes increasingly "routine." Adaptation comes naturally to the expert. The pattern recognition/completion process becomes so automatic and rapid that it is difficult for the expert to explain what led them to their decisions. These skills are best learned by working with and observing clinicians who are already experts. Beginners who understand this phenomenon will be more tolerant of vague and/or complex explanations and confident that, with practice, they too will gradually develop this facility.

Ross (2006) discussed what is involved in becoming expert in a wide variety of fields. Baker, Horton, Robertson-Wilson, and Wall (2003) discussed factors in becoming an elite athlete. Both articles cited the Simon and Chase (1973) 10-year rule which maintains that it takes a decade of hard work to become expert in any field. The latter article also cited the Newell and Rosenbloom (1981) power law wherein the rate of change in performance is initially rapid during the early stages of learning and then slows down over time.

1.6 Summary

This chapter began by addressing background issues concerning evidence-based medicine, the empirically supported treatment debate, what constitutes evidence and competency. The competency-based approach to clinical training has been more fully developed by professional programs. The most elaborate specification being the NCSPP educational model whose components include: relationship, assessment, intervention, consultation and education, management and supervision plus research and evaluation. Six specific foundational competencies were considered citing essential components, behavioral anchors, and assessment methods that indicate readiness for practicum, internship, and practice. These foundational competencies include: reflective practice and self-assessment, scientific knowledge and methods, relationships, individual and cultural diversity, knowledge of ethical and legal standards and policies and interdisciplinary systems. The following six functional competencies were considered: assessment-diagnosis-case conceptualization, intervention, consultation, research and evaluation, supervision and teaching, plus management and administration. Essential components, behavioral anchors, and assessment methods that indicate readiness for practicum, internship,

and practice were identified. A brief discussion of what being expert entails followed. A final version of the "Competency Developmental Achievement Levels (DALs) of the National Council of Schools and Programs in Professional Psychology (NCSPP)" added diversity.

1.6.1   Trajectory of Acquiring Competence

The Practicum Competencies Outline published by Hatcher and Lassiter (2007) commented on the trajectory of acquiring competence. They noted that competencies are acquired at different rates with more complex competencies maturing latter than more basic ones. They expected that clinicians will move sequentially through the five stages reported above that they identified. The trajectory from being a beginner to being an expert seems to follow an exponential (log) course over the span of approximately one decade. The beginning stage entails the acquisition of many facts and specific pieces of knowledge. The middle stage entails connecting academic knowledge with clinical application. Observational learning based on working with experienced clinicians is especially valuable. Pattern recognition and completion increasingly describes the latter stage of professional development where skills are honed to a sharp edge.

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2   Competencies in Child Clinical Psychology

Stephen D. A. Hupp · Jeremy D. Jewell · David Reitman · Monique LeBlanc

Abstract: The present chapter applies much of the discussion from the previous chapter to the unique aspects of providing clinical services to children, adolescents, and their families. For example, the 12 competencies of the "cube model" were designed to represent a broad overview of competencies within the field of professional psychology that could be applied to clinical work with adults as well as clinical work with children. On the other hand, clinical child psychology is a recognized specialty within professional psychology, and there are many differences between clinical work with adults and youth. Following a discussion of the importance of considering clinical child psychology as a specialty, this chapter relates the competencies from the cube model to the practice of clinical child psychology. Other competencies that have been specifically suggested for the clinical child specialization, as well as the subspecialty of pediatric psychology, are also considered. Thus, this chapter reviews and integrates three previous models of competencies, and this integration results in a description of 17 competencies divided into three broad domains including: a) conceptualizing psychological health, b) promoting psychological health, and c) scientific and professional issues. This chapter also describes the developmental progression of the clinical child psychologist from emerging skills to expert competencies. Some consideration is also given to issues related to training competence during graduate school, the predoctoral internship, and continuing education. Finally, the chapter closes with a discussion of the daunting challenge of the assessment of competence.

2.1   Overview

2.1.1   Specialization in Clinical Child Psychology

In the following chapter, we expand upon the construct of "competence" as presented in ❯ Chapter 1, Volume 1 and explore its application to the training of the next generation of clinical child psychologists. Clinical child psychology is a recognized specialty within professional psychology, and though there is considerable overlap between clinical adult and clinical child psychology, core competencies in clinical child psychology deserve unique consideration. The American Psychological Association (APA) Council in collaboration with the Commission for the Recognition of Specialties and Proficiencies in Professional Psychology (CRSPPP) formally approves new specialties in the field and offer the following definition of a specialty.

▶   A *specialty* is a defined area of psychological practice that requires advanced knowledge and skills acquired through an organized sequence of education and training. The advanced knowledge

and skills specific to a specialty are obtained subsequent to the acquisition of core scientific and professional foundations in psychology.

Although the specific dimensions of specialty programs may vary in their emphases and in available resources, every defined specialty in professional psychology will contain: (a) *core scientific foundations in psychology*, (b) *basic professional foundation*, (c) *advanced scientific and theoretical knowledge* germane to the specialty, and (d) *advanced professional applications* of this knowledge to selected problems and populations in particular settings, through use of procedures and techniques validated on the same (Joint Interim Committee for the Identification and Recognition of Specialties and Proficiencies (JICIRSP), 1995).

A specialty in clinical child psychology was considered as far back as in the 1949 Boulder Conference proceedings (famous for elucidating the scientist-practitioner model); however, by 1967, there were only four recognized specialties in psychology: clinical, counseling, school, and industrial/organizational (Drum & Blom, 2001). Roberts and Sobel (1999) discuss some of the obstacles of creating a child specialty. For example, many of those attending the Boulder Conference questioned the merits of distinguishing between clinical work with children and adults. In the decades following the Boulder Conference, the growing clinical and empirical literature concerned with children and families appeared to support the argument for a clinical child specialization. Still, when advocates petitioned for recognition of a clinical child psychology specialty in 1981, the application was denied for failing to establish the unique characteristics of clinical child psychology (Roberts & Sobel, 1999).

Contemporary arguments supporting a clinical child psychology specialty have converged on several points. First, it has been well established that clinical psychology has traditionally focused on adults, with child issues being ignored or added as a subspecialty (Roberts, 2006). For example, the oft-cited problem of extending adult diagnoses and treatments to children without appropriate developmental consideration continues to be of concern among researchers and clinicians. According to Pine et al. (2002), plans to address this issue and those concerning children and adolescents should be implemented in the next revision of the APA's *Diagnostic and Statistical Manual* (DSM). Roberts (2006) also describes the "adultcentrism" present in many clinical psychology programs and has previously argued that children's needs are largely underserved or poorly-served because of a lack of specialty training (Roberts & Sobel, 1999). Based on these arguments as well as an even more substantial body of clinical research with children (Lonigan, Elbert, & Johnson, 1998) and the development of clearer APA standards defining specialties (JICIRSP, 1995), clinical child psychology was finally recognized as a specialty in 1998.

Roberts (2006) suggests that movement toward increased specialization has "invigorated" professional psychology, yet also emphasizes the delicate balance between specialization and unification in psychology. Further, Roberts (2006) stresses the continued importance of a shared commitment to psychology's core professional and scientific foundations. Nevertheless, today there are 11 APA-approved specialties including behavioral, clinical child, clinical health, clinical neuropsychology, clinical (general), counseling, family, forensic, industrial-organizational, psychoanalysis, and school. Some of the specialties are based on the population served (e.g., clinical child), while others are based on a foundational theory (e.g., behavioral). Many professional psychologists fit into more than one specialty (e.g., a behaviorally-oriented, clinical child psychologist). Clinical child psychologists assume many professional roles, ranging from individual child therapist and parenting group leader to school- or hospital-based consultant,

and they also increasingly interact with a myriad of other professionals serving children (La Greca & Hughes, 1999).

The importance of fostering *developmental* competence has received especially high priority in recent reviews of the child specialization (Simeonsson & Rosenthal, 2001). A notable example of this emphasis is the addition of the term "adolescent" to the APA's Division 53 journal (i.e., *Journal of Clinical Child and Adolescent Psychology*) in 2001. The concern over developmental issues arises from the uneven rate and magnitude of physical and developmental change that occurs during early childhood, adolescence, and adulthood. For example, a child's first 2 years of life are characterized by developmental changes far more dramatic than those observed for young adults (or even adolescents) over the same 2-year period. Even to an untrained observer, the differences between a 12-month-old infant and a 36-month-old preschooler are obvious, while the 24-month gap between a sophomore and senior in college (or high school) involves developmental changes far more subtle. In this chapter, we focus on the training needs of persons working with infants, children, and adolescents, but we will use the term *child* unless specific distinctions are required.

Of the 11 specialties that exist today, significant overlap exists between clinical child, family, and school psychologists. Clinical child psychologists often work directly with the child, consult with parents, or conduct therapy sessions involving an entire family. While this coordination of multiple roles with children and families helps distinguish clinical child training from training in adult psychotherapy, such actions also blur the distinction between clinical child and family psychology (recognized as a specialty in 2002). The specialty of family psychology, however, tends to have greater focus on marriage therapy, occupational problems, and issues related to aging. The role of clinical child psychologists and school psychologists also overlap. Clinical child psychologists address school-related issues, such as homework readiness and organizational skills, as well as carry out classroom observations, and consult with teachers. School psychologists often conduct individual or group therapy on school grounds and may offer consultation to parents regarding behavior management issues that affect school and social behavior. Beyond differences in the settings in which clinical child and school psychologists typically work, school psychologists tend to focus more on psychoeducational assessments, monitoring the effectiveness of academic interventions, and help make decisions about educational placement. By contrast, clinical child psychologists are more likely to be involved in the diagnosis of psychopathology, the interventions for psychological disorders, and working with parents.

Though this chapter focuses on clinical child psychology competencies, it is notable that many authors have observed strong similarities between the competencies required of the many child-focused specialties (e.g., La Greca & Hughes, 1999; Roberts, Borden, Christiansen, & Lopez, 2005). As noted by La Greca and Hughes (1999), "[t]he overlap among the different child specialty groups is not surprising, given that a common set of societal and economic forces and scientific developments has influenced the delivery of psychological services to children and families across settings and specialties" (p. 444). Of special note is the relationship between pediatric psychology and clinical child psychology. Pediatric psychology has been described as a subspecialty of clinical child psychology. For example, APA's Society of Pediatric Psychology Task Force (Spirito et al., 2003) indicates "clinical child psychology is the foundation for developing skills and expertise in pediatric psychology" (p. 86), though the Task Force also acknowledges this description is "debatable" and that pediatric psychology also has foundations in clinical health psychology. Regardless,

pediatric psychologists assume many of the same roles as clinical child psychologists, and since pediatric psychology is not a recognized specialty at present, this chapter will include pediatric psychology under the clinical child psychology umbrella. In addition to the competencies noted in this chapter, the training of pediatric psychologists necessarily focuses to a greater degree on helping children and families cope with medical issues (e.g., dealing with a chronic illness, getting an operation, etc.) in residential hospital and outpatient settings. Recent trends in pediatric psychology have moved increasingly toward developing coping skills, resilience, and strength-based approaches identified with "positive psychology" (Roberts, 2005).

2.1.2 Competency Models

Recent attempts at defining core competencies in clinical psychology (adult and child) originated in the 1949 Boulder Conference, which enumerated two major competencies in psychology: science and practice. The integrated scientist-practitioner model was adopted by APA, but some have questioned its legitimacy. McFall (2006) describes the Doctor of Psychology (Psy.D.) degree as posing the first significant challenge to the scientist-practitioner model of clinical training. Psy.D. programs have emphasized the development of practice skills (e.g., assessment, interviewing, developing rapport, etc.), while traditional Ph.D. programs have continued to emphasize the development of research skills, with a more balanced focus on clinical skill development. Beginning in 1995, the Academy of Psychological Clinical Science challenged the scientist-practitioner model from the opposite direction, and has instead focused on the goal of preparing "clinical scientists." Defining core competencies in clinical child psychology may partly depend on which of these models are adopted. However, while varying in emphasis, all existing models allow for some attention to both the science and practice of psychology.

Several attempts have been made to formulate core competencies for clinical child psychologists (La Greca & Hughes, 1999 for a brief summary of historical events in the training of clinical child psychologists). In 1992, the National Institute of Mental Health (NIMH) assembled a group of mental health professionals in the Task Group to Refine Clinical Training Guidelines for Services to Children and Adolescents. This group reviewed the existing models of training with the goal of preparing a comprehensive set of guidelines for the training of clinical professionals working with children. Though the APA ultimately did not approve the resulting document, the committee's recommendations were published in Roberts et al. (1998). The Roberts et al. model includes ten competencies and has inspired other efforts including, Spirito et al. (2003), and the present chapter. All ten competencies introduced in Roberts et al. are listed in ❯ Table 2.1 and are discussed in greater detail later in this chapter. La Greca and Hughes (1999) note three general emphases in Roberts et al.: developmental theory and research, interdisciplinary and comprehensive care, and a multicultural perspective.

Building on the work of Roberts et al. (1998), APA Division 54 members (i.e., the Society of Pediatric Psychology) commissioned a task force to update and modify recommendations for the training of pediatric psychologists (i.e., Spirito et al., 2003). For the most part, the task force embraced the Roberts et al. competencies, with two additions. First, the task force added "consultation and liaison roles," with an emphasis on consulting with physicians

■ **Table 2.1**

Competency models in clinical child, pediatric, and professional psychology

Current chapter on clinical child psychology	Rodolfa et al. (2005) on professional psychology	Spirito et al. (2003) on pediatric psychology	Roberts et al. (1998) on clinical child psychology
Conceptualizing Psychological Health			
Child, adolescent, and family assessment	Assessment, diagnosis, and conceptualization[b]	Child, adolescent, and family assessment	Child, adolescent, and family assessment
Life span developmental psychology (normal)		Life span developmental psychology (normal)	Life span developmental psychology (normal)
Life span developmental psychopathology		Life span developmental psychopathology	Life span developmental psychopathology
Diversity issues	Individual and cultural diversity[a]	Diversity issues	Diversity issues
Social issues		Social issues	Social issues
Disease process and medical management		Disease process and medical management	
Promoting Psychological Health			
Intervention strategies	Intervention[b]	Intervention strategies	Intervention strategies
Relationships	Relationships[a]		
Prevention, family support, and health promotion		Prevention, family support, and health promotion	Prevention, family support, and health promotion
Role of multiple disciplines and service delivery systems	Interdisciplinary systems[a]	Role of multiple disciplines and service delivery systems	Role of multiple disciplines and service delivery systems
Consultation and liaison roles	Consultation[b]	Consultation and liaison roles	
Scientific and Professional Issues			
Scientific knowledge and methods	Scientific knowledge and methods[a]	Research methods and systems evaluation	Research methods and systems evaluation
Research and evaluation	Research and evaluation[b]		
Professional, ethical, and legal issues	Ethical and legal standards/policy issues[a]	Professional, ethical, and legal issues	Professional, ethical, and legal issues
Supervision and teaching	Supervision and teaching[b]		
Management and administration	Management and administration[b]		
Reflective practice and self-assessment	Reflective practice and self-assessment[a]		

Based on the Rodolfa et al. cube model:
[a] Foundational competency.
[b] Functional competency.

and other health care professionals. Second, Spirito et al. added "disease process and medical management" as an additional training domain. Both of these domains are discussed in greater detail later in the chapter, and the Spirito et al. model is also summarized in ❯ Table 2.1.

In 2002, the APA convened a conference on competency (i.e., *Competencies Conference: Future Directions in Education and Credentialing in Professional Psychology*), resulting in the by now, well-known, "cube model" (Rodolfa et al., 2005). ❯ Chapter 1, Volume 1 thoroughly reviews the cube model. In contrast to the Roberts et al. (1998) and Spirito et al. (2003) efforts, the cube model proposed by Rodolfa et al. was intended to serve as a broad competency model for psychology, with each specialization being defined by its population, problems, setting, and theoretical orientation. Overall, the Rodolfa et al. cube model includes six *foundational competencies* (i.e., reflective practice/self-assessment, scientific knowledge and methods, relationships, ethical and legal standards/policy issues, individual and cultural diversity, and interdisciplinary systems) that theoretically form the groundwork for the later-developing *functional competencies* (i.e., assessment/diagnosis/conceptualization, intervention, consultation, research/evaluation, supervision/teaching, and management/administration). Conceptually, foundational competencies would be taught as part of didactic aspects of graduate education, whereas functional competencies (e.g., skills) would be best refined during the direct delivery of clinical services by practicing psychologists or trainees. Finally, the cube model includes five stages of professional development, including doctoral education, predoctoral internship, postdoctoral supervision, residency/fellowship, and continuing education.

2.2   Basic Competencies

Rather than simply applying the cube model to the clinical child specialization, we have attempted to integrate some of the unique features of the cube model with prior efforts by Roberts et al. (1998) and Spirito et al. (2003). We have included every competency suggested by each of these three models, though many of the competencies were in all three models. This integration resulted in 17 unique competencies. We also attempted to organize the competencies into three broad domains. The first competency domain was deemed *conceptualizing psychological health* and includes competencies critical in understanding the unique factors that shape the characteristics of the individual child or family. This domain includes competency in child, adolescent, and family assessment, as well as competency in several areas that influence case conceptualization (e.g., diversity issues). A well-informed case conceptualization is needed before psychologists can exercise competencies in next domain: *promoting psychological health*. The promoting psychological health domain includes competencies needed to foster meaningful psychological change in children and families. Competencies within this domain include specific skills involving intervention, prevention, and consultation, as well as being able to effectively integrate these competencies with other disciplines and within several service delivery systems. Finally, the *scientific and professional issues* domain includes the broader competencies needed to disseminate information and provides services. Competencies in this domain include research, teaching, and other competencies related to serving clients in private practice or other clinical settings. The integrated list of all of the domains, as well as the individual and shared facets of the three competency

models (Roberts et al.; Rodolfa et al., 2005; Spirito et al.), serves as the foundation of this chapter and is presented in ❯ Table 2.1.

2.2.1 Conceptualizing Psychological Health

2.2.1.1 Child, Adolescent, and Family Assessment

Regarding competency in assessment, Roberts et al. (1998) suggest that approaches should include: (a) psychoeducational and behavioral assessment from birth through age 21, (b) assessment with parents and other family members, and (c) consideration of sociocultural variables. Thus, assessment with children requires facility with a broad range of assessment techniques including both indirect and direct methods (Reitman, Hummel, Franz, & Gross, 1998). Moreover, competence in assessment includes broad skills in both acquiring the information needed for diagnosis, as well as gathering information needed for treatment planning (Reitman & Hupp, 2003). In distinguishing between these two roles of assessment, Scotti, Morris, McNeil, and Hawkins (1996) contrast the current structural criteria of the DSM-IV (American Psychiatric Association, 2000) with a functional analysis system in which greater emphasis is given to identifying target behaviors, using the assessment to inform treatment design, and evaluating the effectiveness of treatment. Roberts et al. describe this functional approach as being a problem-solving process in which hypotheses are tested during assessment and intervention.

Assessment in clinical child psychology typically involves multiple methods, including both indirect and direct approaches that aid in generating hypotheses. Indirect methods of assessment include clinical interviews and questionnaires. Interviews are often done with more than one person, and frequently with multiple people at the same time (e.g., a family). Depending upon the purposes of the assessment and age of interviewee, the skills required of interviewers may vary greatly. For example, competence in establishing rapport could vary across the age groups interviewed. Using questionnaires can also be more complicated in clinical child psychology. Clinical adult psychologists may employ a single measure with all adults seen in their practice. For example, the Minnesota Multiphasic Personality Inventory – Second Edition (MMPI-2; Butcher et al., 2001) can be used with adults 18-years old and up. By contrast, the Behavior Assessment System for Children – Second Edition (BASC-2; Reynolds & Kamphaus, 2004), a commonly used measure in clinical child settings, employs different forms for children (ages 8–11), adolescents (ages 12–21), and college students (ages 18–25). The BASC-2 also includes teacher and parent report measures. Thus, the clinical child psychologist must become familiar with similarities and differences between these variations of the same instrument.

Direct methods of assessment include psychoeducational testing and behavior observations. Clinical child and school psychologists have considerable overlap in the competency of psychoeducational testing which includes assessment of a child's developmental level, cognitive assessment, tests of achievement, or a combination of these methods. Behavior observations are another area of overlap for clinical child and school psychologists. While school psychologists are more likely to do classroom observations, clinical child psychologists are more likely to observe children interacting with family members. Observational data can be clinically useful, but it requires a higher level of effort to obtain than most interviews or rating scales. Moreover, while standardized analogue observations are sometimes conducted that may lend themselves to standardization, in vivo observations tend to be more idiosyncratic and occur in settings

(e.g., schools) that might limit the extent to which competence can be accurately assessed. While diagnosis is often one of the assessment goals, another goal includes determining function (Scotti et al., 1996). That is, clinical child psychology requires competence in determining the potential antecedents and consequences of maladaptive and adaptive behavior. Functional behavioral assessment (FBA) can be conducted through interview, questionnaires, and natural observations. Also, in the case of functional analysis, FBA is sometimes conducted through the psychologist observing behavior while purposefully manipulating antecedents and consequences.

Having chosen a subset of assessment techniques, the clinician is then faced with complex decisions about how to weigh discordant information and determine level of impairment (Reitman et al., 1998). As noted by many authors, we can offer little evidence-based guidance to users concerning how best to combine information from various sources. The task is complicated further when one considers the purposes of assessment, as some measures may be useful for differentiating diagnosis but greatly limited as measures of change (Mash & Hunsley, 2005). That is, assessment in clinical child psychology includes monitoring the effectiveness of the treatment (also called response to intervention). As one example, there are only a limited amount of times that a psychologist could administer some intelligence tests, whereas some other forms of academic assessment have been designed to be used more frequently. In addition to measuring changes in the child, some assessment tools have been designed to measure changes in others as well. For example, in a recent study, the Parent Instruction-Giving Game with Youngsters was used to monitor the effectiveness of behavioral parent training on both parent and child behaviors (Hupp, Reitman, Forde, Shriver, & Kelly, 2008). Parents and teachers are often also involved in keeping track of behaviors over time, and depending on the developmental level, the child sometimes self-monitors behavior as well.

2.2.1.2 Life Span Developmental Psychology (Normal Development)

Developmental considerations are important in both clinical child and adult psychology, but they are paramount in the former case. For children, similar behaviors (e.g., difficulty separating from a parent, temper tantrums, etc.) while typical in one phase of development are atypical in other phases. As discussed by Roberts et al. (1998), the clinical child psychologist must have a firm knowledge of developmental norms or benchmarks in many developmental areas including social, cognitive, emotional, behavioral, and physical domains. For example, a competency in life span development includes knowledge of major developmental milestones, such as walking, talking, and self-care. Later in development, sleep habits, social behavior, and cognitive abilities change markedly from infancy to adolescence. The life span development competency also includes knowledge of developmental issues characteristic of young adulthood and middle age as clinical child psychologists will often work closely with adults responsible for shaping child development. That is, multiple systems influence child development, and the training of a clinical child psychologist must focus on understanding the important relationships of the child. Bronfenbrenner's (1979, 2005) ecological systems theory includes family, school, peers, church, neighborhood, mass media, and cultural beliefs, and emphasizes interactions between these systems, such as the quality of communication between parents and the school. These systems affect children differently at different ages. For example, as children mature, they tend to spend more time with their peers, and less time with their parents. Thus, over time peers gradually have more influence on development (Arnett, 2007).

Determinations concerning the extent to which a given behavior can be considered "abnormal" and the degree to which such behavior results in "clinically significant impairment" (e.g., making a diagnosis) can only be made when competency in recognizing normal developmental processes is obtained. Some behaviors are so common in younger children that they are not considered diagnostic of clinical syndromes until later in development. For example, nighttime bed-wetting is a common problem in early child development. Thus, a child must reach 5-years old before enuresis can be diagnosed (American Psychiatric Association, 2000). Other behaviors in children require a time length that is not required in adults. For example, because transient fears of specific stimuli or situations (e.g., bugs, the dark, etc.) are very common in childhood, specific phobias cannot be diagnosed unless the duration of the fear exceeds 6 months (American Psychiatric Association, 2000).

2.2.1.3 Life Span Developmental Psychopathology

Competencies in life span developmental *psychology* (i.e., normal development) and life span developmental *psychopathology* (i.e., abnormal development) are complementary, but distinct competencies. A competency in life span developmental psychopathology includes knowledge of behavioral issues, mood problems, learning disorders, and developmental challenges across the life span, including into adulthood (Roberts et al., 1998). This competency requires a clear understanding of diagnostic comorbidities. For example, the importance of assessing for dual diagnoses in children with intellectual disabilities has been emphasized (Matson & Bamburg, 1998).

Many of the disorders in the *Diagnostic and Statistical Manual of Mental Disorder – Fourth Edition – Text Revision* (DSM-IV-TR; American Psychiatric Association, 2000) require onset before adulthood. For example, the criteria for mental retardation and separation anxiety disorder must be met before the age of 18. To qualify for a diagnosis of attention-deficit/hyperactivity disorder (ADHD), the individual must have shown some significant symptoms before age 7. Also, for children to be diagnosed with autistic disorder, they must evidence some impairment in either social behavior, communication, or play before age 3. For other disorders, important differences emerge in the diagnostic criteria for children and adults. For example, irritability can be substituted for depressed mood when diagnosing depression with children.

Though the DSM-IV-TR diagnoses typically avoid discussion of etiology, competent practice of clinical child psychology may be facilitated by such knowledge. Indeed, research in behavioral genetics supports both genetic and environmental influence for most disorders; however, the degree of heritability varies considerably from one disorder to the next. For example, the heritability of autism (Gupta & State, 2007) is considerably higher than the heritability of oppositional defiant disorder (Dick, Viken, Kaprio, Pulkkinen, & Rose, 2005). In fact, heritability plays a variable role even when comparing the different anxiety disorders (Kendler, Neale, Kessler, Heath, & Eaves, 1992). Interestingly, recent research suggests that the influence of genetic factors may vary across the life span (Gregory & Eley, 2007). Mechanisms of environmental influence may include such factors as classical conditioning, operant conditioning, and social learning processes and have, in most cases, shown that non-shared factors, unique to the developing child or adolescent, seem to contribute most to environmental variation (Plomin, 1990). Non-shared environmental influences may reflect parenting practices, but may to an

even greater extent involve peer influence, a child or adolescent's perceptions of the environment, or even relatively by chance the interaction between the developing child and the environment (Plomin, Asbury, & Dunn, 2001). By contrast, shared environmental factors linked to the social environment such as crime and poverty seem to play a more important role in the development of conduct disorder (Plomin, 1990).

2.2.1.4 Diversity Issues

Most recent models of competency include a multicultural component, including awareness and knowledge about multicultural issues and the skills needed to provide culturally and ethnically competent services. Psychologists and the families to whom they provide services are embedded in sociocultural frameworks. The groups to which people belong impact many aspects of functioning, including cognitive, affective, and behavioral development. The degree to which a given behavior is considered normal or abnormal must be evaluated within a cultural context. How families express problems, whether treatment is desired or sought, and what outcomes are preferred are also influenced by cultural norms (Johnson & Tucker, 2008).

The APA ethics code calls for psychologists to develop an understanding of how culture may affect psychological services and research, and the APA's recently published *Guidelines on Multicultural Education, Training, Research, Practice, and Organizational Change for Psychologists* (APA, 2003) points the way toward establishing this competence. However, multicultural competence is itself a multifaceted concept. While ethnic and racial diversity are commonly accepted elements of diversity, sexual orientation, socioeconomic status, religious affiliation, age, disability, and family structure may be other important dimensions. The picture is increasingly complicated as many of these areas of diversity intersect with or contribute to educational and health disparities that are known to affect physical and mental health (Sue & Sue, 2003).

Competence in diversity involves three components: awareness, knowledge, and skills (Hansen, Pepitone-Arreola-Rockwell, & Greene, 2000). Awareness of diversity issues is considered to be the first step in developing cultural competence. Clinical child psychologists should be aware of their own beliefs and values and how these factors influence their delivery of psychological services. Additionally, psychology as a whole is considered to have been shaped by a Western worldview (APA, 2003; Hansen et al., 2000; Johnson & Tucker, 2008). For instance, Western norms may convey that socially competent children are independent, assertive, and outgoing, while Asian cultures are often regarded as valuing conformity, behavioral inhibition, and dependence in children (APA, 2003; Chen, Rubin, & Sun, 1992).

The multiculturally competent clinical child psychologist is knowledgeable about the beliefs and practices of diverse groups and the way in which those beliefs and practices influence the effective practice of psychology (APA, 2003). Cultural norms also impact the definition of psychopathology, the interaction between the psychologist and family, and the assessment and treatment process (Johnson & Tucker, 2008). For example, gender and ethnic differences in assessment and treatment rates for ADHD have been demonstrated with researchers finding that Caucasian children are twice as likely to use stimulants as ethnic minority children, despite similar symptom profiles (Hudson, Miller, & Kirby, 2007). One study found that perceptions of ADHD-related symptoms were different among parents of African-American children and Caucasian children and screening instruments appeared to perform differently for the two groups (Hillemeier, Foster, Heinrichs, & Heier, 2007). Moreover,

African-American parents have reported fewer expectations about the effectiveness of treatment (Bussing, Gary, Mills, & Wilson, 2007). Knowledge about these factors can inform the development of ethnically appropriate assessment and treatment for ADHD in children.

Development of multicultural competence does not require the child psychologist to develop an entirely new set of assessment and intervention skills, but it is important to recognize that assessment and intervention may be more effective when cultural context is considered (APA, 2003). The competent psychologist uses appropriate assessment techniques and measures and considers culture and group norms when conceptualizing cases and planning treatment. For example, a culturally competent clinical child psychologist should examine the norms for psychological test instruments to ensure applicability to diverse child populations, attempt to establish rapport with the child and family in a culturally appropriate manner, address barriers to treatment, such as beliefs and stigma concerning psychological problems, and address communication differences (Johnson & Tucker, 2008).

2.2.1.5 Social Issues

Competent clinical child psychologists must be capable of recognizing, understanding, and influencing, when appropriate and feasible, social forces that affect families. Many of the challenges to successful development in childhood are related to the social environment (Bell & Luebbe, 2008). These social issues can include, but are not limited to, child abuse and neglect, witnessed violence, family disruption, homelessness, death, poverty, and lack of access to quality health care services. Negative social circumstances may directly affect psychological functioning but may also interfere with future development, placing the child at risk for future psychological problems and social or vocational dysfunction.

Child maltreatment and witnessed violence are examples of serious social issues facing children. Some children experience high rates of maltreatment, including sexual, physical, and emotional abuse, as well as neglect of children by caretakers. In 2006, child protective services investigated 3.6 million cases of child maltreatment with about 900,000 children classified as victims (Centers for Disease Control, 2008). Sadly, these data are thought to underestimate the incidence of child maltreatment (Wekerle, Miller, Wolfe, & Spindel, 2006). Moreover, children witnessed high levels of domestic or intimate partner violence as well as violence in their communities. A nationally representative study of adolescents found that 39% reported witnessing an act of serious violence in their lifetimes, such as witnessing someone being shot or hurt with a weapon (Kilpatrick, Saunders, & Smith, 2003). Some risk factors interact, as children who live in poverty are at higher risk for witnessing violence and being neglected. Although child maltreatment and witnessing violence are not psychological disorders, they have been linked to a plethora of negative psychosocial consequences, including aggressive behavior, conduct problems, depression, anxiety, and symptoms of posttraumatic stress disorder (Wekerle, MacMillan, Leung, Jamieson, 2008).

High rates of child maltreatment and violence exposure virtually guarantee that clinical child psychologists will have some contact with individuals and families who have experienced these events (Champion, Shipman, Bonner, Hensley, & Howe, 2003). A competency in social issues includes awareness and knowledge of the prevalence of maltreatment and violence exposure, comorbidity and associated features, appropriate assessment techniques, and a strong grasp of ethical and legal issues related to the criminal justice system, such as mandated

reporting. This competency also includes being able to incorporate social issues into case conceptualization and helping families obtain additional support services. Clinical child psychologists may enhance their level of competence by participating in prevention and child advocacy activities (Bell & Luebbe, 2008).

2.2.1.6 Disease Process and Medical Management

Around 10–15% of children experience chronic illness, and rates of certain chronic diseases, such as Type II diabetes and asthma, have increased substantially in recent years (Akinbami, 2006; Tarnowski & Brown, 2000; Wysocki, Greco, & Buckloh, 2003). As a result both pediatric psychologists and clinical child psychologists need to establish a basic competency in the general understanding of common pediatric illnesses, contemporary treatments for pediatric illness, knowledge of medical terminology (to facilitate communication between physicians and families), and common side effects of medication and other medical interventions used to treat chronic illness in children. To be clear, this competency is focused on the medical management of medical issues, whereas the medical management of psychological issues is later included in the *intervention strategies* competency.

Diabetes serves as an excellent model for establishing competence in disease process and medical management. The medical regime for children diagnosed with diabetes is complex and generally includes frequent self-monitoring of blood glucose, dietary control, exercise, oral medication, and insulin injections or pumps. Noncompliance with treatment for children diagnosed with diabetes is common and related to a multitude of factors, including patient and family knowledge, parental involvement, family communication, and developmental status (Chisholm et al., 2007; Dalewitz, Khan, & Hershey, 2000). Developmental status is important as adolescents, regardless of greater disease knowledge, are more noncompliant than children, possibly related to peer concerns and greater autonomy from parental control (Naar-King, Podolski, Ellis, Frey, & Templin, 2006; Thomas, Peterson, & Goldstein, 1997). Diabetes is also associated with increased risk of psychological problems, including depression, anxiety, and eating disorders (Kovacs, Obrosky, Goldstone, & Bonar, 1997; Vila, Robert, Nollet-Clememcon, & Vera, 1995). Finally, stress is thought to impact glycemic control and treatment compliance (Wysocki et al., 2003). Obviously, competence in disease management requires a diverse skill set, including helping children and families adjust to chronic disease, fostering adherence to treatment, teaching the child how to cope with pain or invasive procedures, and differentiating between symptoms associated with illness and those stemming from poor psychological adjustment (Roberts, Mitchell, & McNeal, 2003; Spirito et al., 2003). While it is clear that the full set of competencies noted above may be required for pediatric psychologists, it is less clear that these competencies are "core" requirements for all clinical child psychologists.

2.2.2 Promoting Psychological Health

2.2.2.1 Intervention Strategies

A competency in intervention strategies includes (1) selecting an appropriate intervention based on accurate diagnosis and/or functional assessment, (2) implementing the intervention,

and (3) making necessary modifications to the intervention plan, as needed. Regarding selection of interventions, the *Journal of Clinical Child and Adolescent Psychology* recently published a special issue on evidence-based psychosocial treatments (Silverman & Hinshaw, 2008 for an overview). This special issue reviews contemporary psychosocial treatments for autism, eating disorders, depression, phobic and anxiety disorders, obsessive-compulsive disorder, trauma exposure, ADHD, disruptive behavior disorders, and substance abuse. Of special significance is a final review that examines research on evidence-based treatments for ethnic minority children and adolescents (Huey & Polo, 2008).

According to Silverman and Hinshaw (2008), evidence-based treatment (previously called empirically supported or empirically validated treatments) reviews were prepared based upon criteria that were originally developed by an APA Task Force charged with identifying effective treatments in clinical psychology (Chambless et al., 1996). These reviews classify their respective treatments as well-established, probably efficacious, possibly efficacious, or experimental. The criteria for inclusion in the well-established category include (a) at least two well-designed group studies, (b) the studies were conducted by different research teams, and (c) the studies demonstrated that the treatment was superior to another treatment or placebo. Several interventions have been found to meet the criteria for being a well-established treatment; however, few interventions are regarded as having been disseminated adequately (Silverman & Hinshaw, 2008). In fact, Herschell, McNeil, and McNeil (2004) argue that the dissemination of evidence-based treatments has occurred more slowly for child clients than for adults.

For the evidence-based treatments, manuals have been developed to increase treatment integrity in research studies, and these same treatment manuals may be used by practitioners. However, one study found that approximately half of practicing psychologists reported they had never used a manual and did not have comprehensive knowledge of the content of manuals (Addis & Krasnow, 2000). To reduce dissemination barriers, Herschell et al. (2004) suggest that manuals must: (a) become more "clinician-friendly," (b) increase attention to developmental issues, and (c) allow for greater flexibility. Herschell et al. also suggest that graduate training programs should include a greater emphasis on evidence-based treatments. Additionally, Silverman and Hinshaw (2008) emphasize the importance of clinicians and researchers being aware of treatment mediators (i.e., how change is produced during therapy) and moderators (i.e., who is most likely to benefit from therapy and under what conditions).

In addition to psychosocial interventions, Kollins and Langberg (2008) present several arguments for developing clinical competency in pharmacological interventions for children. First, pharmacological interventions are on the rise. Second, there is considerably less research with children than with adults. Third, and related to their second point, knowledge of medication side effects, particularly very serious ones (e.g., suicidal ideation, cardiac problems, etc.), is of paramount importance. Fourth, some medication side effects mimic or diminish behavioral symptoms, which may complicate diagnosis. Finally, psychopharmacological competence may be valuable when clinical child psychologists participate in multidisciplinary settings or are needed to help clients make decisions about psychosocial treatments alone, pharmacological treatments alone, or combined treatments (Burns, Rey, & Burns, 2008). Because all but a few psychologists are barred from prescribing (Ax et al., 2008), this competency largely concerns itself with the clinical child psychologist's role as a consultant and client advocate (LaFleur & Northup, 1997 for an example in school psychology).

2.2.2.2 Relationships

The cube model presented in Rodolfa et al. (2005) includes relationships as one of the foundational competencies. Braswell and Kendall (2001) provide some insight into therapist behaviors that might facilitate different kinds of relations, suggesting that "a therapist must be able to teach in a playful manner and play in a way that teaches" (p. 250). However, a different teaching style may be required for teaching adolescents, and yet another skill set may be needed for parent or teacher consultation. Thus, the clinical child psychologist must often work toward developing an alliance with an adult while at the same time developing a bond with the child. Interestingly, while the therapeutic alliance has been well studied in the adult literature across several treatment modalities, far fewer studies have examined therapeutic alliance in clinical child psychology.

In one of the few studies examining alliance with youth, Kazdin and Whitley (2006) defined *alliance* as "the quality and nature of the patient-therapist interaction, the collaborative nature of that interaction on the tasks and goals of treatment, and the personal bond or attachment that emerges in therapy" (p. 346). Their study revealed that a stronger parent–therapist alliance was associated with improvements in parenting practices during parent management training. A previous study provided evidence that both the parent–therapist and child–therapist relationships were correlated with intervention gains and treatment acceptability (Kazdin, Marciano, & Whitley, 2005). Similarly, in a study of adolescents diagnosed with anorexia nervosa, early adolescent–therapist alliance was associated with early treatment gains while later parent–therapist alliance was associated with treatment completion (Pereira, Lock, & Oggins, 2006). Collectively, these studies support the contention that clinical child psychologists must often cultivate multiple supportive relations (e.g., the child, one or two parents, teachers) to maximize the likelihood of treatment success.

Research has identified some factors that have been associated with benefits in therapy. For example, facilitative and supportive comments made by the therapist predict treatment gains and parental cooperation during behavioral parent training (Harwood & Eyberg, 2004; Patterson & Chamberlain, 1994). Other factors that may influence alliance include gender and ethnicity. In a study of adolescents with substance abuse problems, Wintersteen, Mesinger, and Diamond (2005) found that adolescent–therapist alliance was higher when the adolescent and therapist were of the same gender, and matched gender was also associated with higher therapy completion rates. Similarly, adolescents were more likely to complete therapy when they were the same ethnicity as the therapist. This research suggests clinical child psychologists would benefit from knowledge about factors influencing alliance, as well as developing actual skills that promote alliance and minimize barriers to alliance.

2.2.2.3 Prevention, Family Support, and Health Promotion

Prevention has been a growing area of interest in clinical child psychology. Herschell et al. (2004) view prevention as an important and innovative area of focus for clinical child psychology training. Clinical child psychologists often see some symptoms of psychological problems even though the criteria for a particular diagnosis have not been met; thus, therapy often includes preventing some problems from developing into a disorder. Spirito et al. (2003) also emphasize the greater role psychology could take in disease prevention and helping

families promote resiliency in children. Weisz, Sandler, Durlak, and Anton (2005) present an integrated model of treatment, prevention, and health promotion in strengthening mental health with children. The model includes seven types of programs including three degrees of *intervention* (continuing care, enhanced therapy, and time-limited therapy) which may vary from long-term care to just a few treatment sessions. The model also includes three levels of *prevention* (indicated, selective, and universal). Indicated prevention involves programs designed for children demonstrating some significant symptoms without yet meeting the full criteria for a disorder. Selective prevention programs attempt to minimize risk factors in a selected group of children, while universal prevention programs focus on decreasing the effect of risk factors for every child in a particular population (e.g., the entire school). Finally, *health promotion* has "the goal of enhancing strengths so as to reduce the risk of later problem outcomes and/or to increase prospects for positive development" (p. 632). Thus, health promotion focuses more on building strengths rather than managing weaknesses. Like preventative medicine, preventive mental health care currently has serious limitations due to the current managed care system; however, preventative mental health care has the potential to ultimately have financial benefits for clients and the managed care system.

Weisz et al. (2005) indicate that there are over 125 prevention programs with good research support. These programs cover a broad range of issues with children including externalizing problems, internalizing problems, drug use, and other issues. Programs target children, parents, and teachers in many different settings (e.g., home, school, neighborhood agencies, etc.), and often the same program covers several types of prevention. For example, several variations of the Positive Parenting Program (Triple-P) have research support (Sanders, Bor & Morawska, 2007). Triple-P was designed to prevent externalizing problems as well as child abuse, and has five possible levels including: (1) a media-based universal prevention program, (2) a 1- or 2-session primary health care program, (3) a 4-session primary health care intervention, (4) an 8–10-session program for individuals or groups, and (5) an enhanced behavioral family intervention. Potentially, clinical child psychologists could implement this program for a variety of families with a range of problem severity.

2.2.2.4 Role of Multiple Disciplines and Service Delivery Systems

Bronfenbrenner's (1979) ecological systems model emphasizes the interaction between the individual and various levels of their environment that shape the individual's behavioral, social, and emotional functioning. Clinical child psychology training programs must also take into account these factors as they seek to promote interdisciplinary competencies needed to promote successful development. Borrowing from Roberts et al. (1998), La Greca and Hughes (1999) described this competency by indicating it "includes interprofessional, interagency, and family-professional collaboration, as well as an understanding of the roles and responsibilities of various service systems (e.g., educational, medical, public mental health, welfare) and disciplines (e.g., education, pediatrics and family practice, social work, psychiatry, law) in providing service to children, adolescents, and their families" (p. 440).

The value of multidisciplinary teams has been recognized by many professions, and some training programs in clinical child psychology have made formal efforts to facilitate these connections. La Greca and Hughes (1999) emphasize the importance of interdisciplinary training and the value of acquainting clinical child psychologists with the school administrators,

teachers, school social workers, and school counselors who play such an important role in children's lives. Knowledge of these disciplines "at a distance" is not sufficient, as ideally trainees should have working experience with these other disciplines through various collaborative experiences. Similarly, pediatric psychologists also serve on multidisciplinary teams in hospitals with a diverse group of other professionals. While most students will acquire cursory knowledge or obtain superficial experience with other professionals in these systems, those seeking specific specialization will require a great deal more practicum and internship experience, if meaningful competencies are to be achieved (Spirito et al., 2003).

2.2.2.5 Consultation and Liaison Roles

Clinical child psychologists often take the role as consultant, and this is particularly true for pediatric psychology (Spirito et al., 2003) as psychologists in hospital settings work closely with physicians to help deal with the psychological aspects of medical issues. Clinical child and pediatric psychologists also commonly provide consultation with families and within the school system by providing recommendations and facilitating communication between parents and teachers. While consultation is normally defined as a process by which one professional seeks another for assistance in solving some problem (in this case related to a child client), the role of liaison is somewhat different. That is, the primary role of a liaison is to provide communication between two separate systems. For example, a pediatric psychologist may work with a child who is recently diagnosed with lymphoma and requires long-term hospitalization. In this case, the psychologist might serve as a liaison between hospital staff caring for the child and the school personnel regarding the child's educational needs, any special education status, and school work that can be completed while in the hospital.

This competency is similar to the previously discussed competency (i.e., role of multiple disciplines and service delivery systems). The Rodolfa et al. (2005) cube model's distinction between foundational and functional competencies might be a good framework for distinguishing between these two types of competencies. That is, Rodolfa et al. define the *role of multiple disciplines* (i.e., interdisciplinary systems) as a foundational competency with the following definition: "Identification and involvement with one's colleagues and peers. Knowledge of key issues and concepts in related disciplines and the ability to interact with professionals in them" (p. 351). Alternatively, the functional competency of *consultation* is defined as follows: "The ability to provide expert guidance or professional assistance in response to a client's needs or goals" (p. 351). Spirito et al. (2003) also include both competencies and make a distinction between the training needs of these competencies. That is, for the competency in the *role of multiple disciplines*, Spirito et al. indicate that the primary training topic should be "experience on multidisciplinary teams delivering health care services" (p. 92), while the primary training topic for competency in *consultation* is described as "exposure to different consultation-liaison models and supervised experience providing consultation in health care settings" (p. 92). Thus, both models describe these as unique competencies.

With respect to theoretical models, while behavioral and cognitive-behavioral orientations toward consultation are most often reported by practitioners, mental health, solution-oriented, and systems/ecological models are also endorsed (Anton-LaHart & Rosenfield, 2004). One should also consider variations in the role of the consultant. Some consultants provide direct services to the "client," whereas others adopt an indirect approach. For example, client-centered

models of consultation often provide services to those working closest with a single child (Brown, Pryzwansky, & Shulte, 2006). By contrast, consultee-centered consultations, as well as systems or organizational consultations, provide services intended to benefit the broader population of clients served. For example, when working from a client-centered mode using a behavioral consultation theoretical model, consultants work directly with the teacher regarding a single child's misbehavior in the classroom (Noell, Witt, Gilbertson, Ranier, & Freeland, 1997). However, organizational models of consultation might focus to a greater extent on policy and procedural changes that require administrator input, such as adoption of a school-wide discipline program. Consultation in these examples may look quite different, and require knowledge of differing content as well as different process skills (Anton-LaHart & Rosenfield, 2004). *Content* refers to the knowledge base used by the consultant to lead a problem-solving experience. *Process* refers to the interpersonal processes as well as theoretically defined stages of consultation that dictate the "flow" of the consultation. Because knowledge is required prior to the delivery of consultative services, it stands to reason that consultation courses may need to occur later in a training program's curriculum as opposed to earlier (Meyers, 2002).

There are two other points that can also be made regarding the unique training needs for the consultative role. First, there are currently no ethical guidelines that address the specific ethical dilemmas that may occur during consultation. Rather, consultants must rely on the general APA ethical guidelines as they apply to other roles such as assessment and psychotherapy (Brown et al., 2006). Presumably, training in consultation is even more important than in other competency areas because of the apparent gap in the ethics code. Second, there is a need for specific practica in consultation (Atella & Figgatt, 1998). The status quo for most training programs is for students to acquire experience with consultation in practica in a haphazard and nonsystematic fashion. Alpert and Taufique (2002) discuss the need for practica sites and experiences whose role is specific to consultation, as well as the need for careful selection of such sites and supervisors.

2.2.3 Scientific and Professional Issues

2.2.3.1 Scientific Knowledge and Methods

The cube model distinguishes between two competencies directly related to science, including (1) scientific knowledge and methods, and (2) research and evaluation (Rodolfa et al., 2005). The first of these competencies, *scientific knowledge and methods* is described as a foundational competency and is defined as "the ability to understand research, research methodology and a respect for scientifically derived knowledge, techniques of data collection and analysis, biological bases of behavior, cognitive-affective bases of behavior, and lifespan human development" (p. 351). This competency includes understanding research design and statistics in an effort to make the psychologist an educated consumer of the research literature. In other words, psychologists need a thorough understanding of the strengths and limitations of research designs and statistical tests so that they can appropriately critique research in their field. Ideally, the psychologist will be able to distinguish between meaningful research that should inform practice versus research that has little value because of weak methodology.

Evidence-based practice is a broad term that encompasses every aspect of one's professional role, ranging from selection of reliable and valid assessment tools to staying abreast of

contemporary research on biological, cognitive-affective, and developmental factors that affect child development. Incorporating new information into one's case conceptualization represents a further challenge. Evidence-based practice also includes choosing treatments that are most likely to be effective for a given client and for developing an awareness of what factors promote or diminish their effectiveness. Over the past years, a series of important publications has informed the empirical goals of clinical child psychology. The evidence-based practice movement initiated in the mid-1990s (Chambless et al., 1996) has inspired two comprehensive reviews of the child treatment literature (Lonigan et al., 1998; Silverman & Hinshaw, 2008). Another comprehensive review was undertaken to explore the state of contemporary clinical child assessment (Mash & Hunsley, 2005). Collectively, these reviews reveal both substantial progress and significant barriers to delivering effective clinical services. Given the existing limitations of knowledge concerning "what works," the task of training and promoting continuing education is daunting.

2.2.3.2 Research and Evaluation

Research and evaluation is described as a functional competency in Rodolfa et al. (2005), and it is defined as "the generation of research that contributes to the professional knowledge base and/or evaluates the effectiveness of various professional activities" (p. 351). The extent to which this functional competency is a "core" competency for clinical psychology has been debated for over 40 years (McFall, 2006). Gaudiano and Statler (2001) provide a brief and insightful distillation of the debate between researchers and practitioners. Programs ascribing to the scientist-practitioner model (generally, those programs conferring the Ph.D.) often have greater expectations for students to be both informed consumers of research as well as active producers of research. On the other hand, programs ascribing to a scholar-professional model (generally, Psy.D. programs) generally emphasize the competency in scientific knowledge over competency in active research and evaluation.

Belar (2000) illustrates the symbiotic interaction between science and practice, arguing science is core to guiding the practice of psychology. At the same time, she argues that it is the responsibility of scientists to produce research that remains relevant to clinical practice. One recent mechanism for fostering better integration between research and practice may be through the application of the "clinical dashboard" (Daleiden & Chorpita, 2005). The clinical dashboard merges session-by-session information regarding the client's symptomology severity with a record of the therapeutic techniques employed in each session. In this way, the clinician is able to gauge the general effectiveness of therapy and can potentially estimate the effectiveness of particular techniques used in each session (Higa & Chorpita, 2008). Level-one research (Hawkins & Mathews, 1999) is another example of an attempt to make clinical research more relevant and more informative for practicing clinicians. Essentially, this approach only demands that data are collected on meaningful clinical outcomes, data are collected frequently, and data are used to foster changes in the treatment plan or conceptualization. Reitman and Drabman (1999) demonstrated this approach by using a simple, parent-completed, time-out record in the treatment of tantrums with an 8-year-old boy. During clinic sessions, time-out records were reviewed and the therapist graphed and shared this information with the parent. Decisions concerning how to respond to various forms of challenging behavior and goals for practice between sessions were developed from these in-session activities. It remains

to be seen whether teaching graduate students or professionals to apply such methods will foster better clinical outcomes than are presently being obtained in general clinical practice (Weisz, Jensen-Doss, & Hawley, 2006).

Clinical child psychologists may be involved in research and evaluation in multiple ways. Those pursuing careers in academia utilize a broad range of research abilities, including evaluating the psychometric properties of assessment tools, designing treatment evaluation research, and meta-analysis. However, even practitioners outside of academia can use functional research skills. For example, single-case research designs can be used to evaluate the effectiveness of treatments with individual clients (Morgan & Morgan, 2001). Finally, speaking to the larger issue of what scientists can learn from practitioners, Kazdin (2008) argues that one of the regrettable features of clinical psychology is how much knowledge is lost in clinical practice. That is, most clinicians gain a wealth of knowledge and experience that is rarely passed on to other psychologists in any systematic way to help other clients. While clinicians may share some of what they have learned to a few other clinicians (e.g., through supervision), this knowledge infrequently contributes to the accumulated knowledge of the field of psychology. Thus, Kazdin argues for more systematic ways of evaluating treatment outcome for all clinicians, so there is a mechanism for sharing knowledge gained from an accumulation of cases. This systematic evaluation might prompt more integration of clinical work and research.

2.2.3.3 Professional, Ethical and Legal Issues

Clinical child psychologists are required to adhere to the APA's *Ethical Principles of Psychologists and Code of Conduct* (2002). Licensed psychologists must also adhere to relevant state laws governing practice in their state. However, psychologists working with children face ethical and legal issues that greatly increase the complexity of clinical practice and do not affect those working only with adults. Issues such as confidentiality and informed consent, which seem rather straightforward when obtained in the context of adult psychotherapy, can be quite challenging for first-time family and child therapists (Sattler, 1988). Moreover, significant training and role play may be needed before novice therapists can be considered competent in this practice.

One area that highlights the complexity of clinical child training in this area is confidentiality. The Model Act for State Licensure of Psychologists (APA, 1987) outlines eight scenarios in which confidentiality may be broken. However, many of these scenarios are ambiguously described and may be difficult to apply to specific situations. For example, if a 14-year-old adolescent seeking therapy states to her therapist that she is planning on committing suicide, the ethical guidelines and model act clearly allow and require that confidentiality be broken. However, imagine that the same young woman tells her therapist that she is having unprotected sex and abusing alcohol. The therapist's duty to disclose this confidential information is guided by a number of factors, the first being the state in which they are practicing. States vary in how they handle confidentiality between children and therapists, and state laws also often lack clarity. Second, the therapist must consider whether the child sought therapy on his or her own without parental consent or whether the parent presented the child for treatment and signed a consent form. Other ethical and legal issues such as duty to report and neglect child abuse are also faced quite frequently by the clinical child psychologists. Given the incredible complexity of the legal and ethical issues surrounding the provision of services

to children, as well as the ambiguity of state and federal statutes, adequate training in ethical and legal issues is critical.

2.2.3.4 Supervision and Teaching

While explicit training in supervision skills has been regarded as critical (Barnett, Erickson Cornish, Goodyear, & Lichtenberg, 2007), steps toward making this a reality have only recently been taken. Arguments for explicit training in supervision arise from the observation that most graduates of clinical programs will, at some point in their career, supervise a junior colleague, and that many do so without formal training in supervision (Barnett et al., 2007). Competency in supervision first requires competency in psychotherapy and such training is typically at the center of graduate training in clinical child psychology. Indeed, competent supervision appears to require a complex skill set that is presently overlooked in most graduate training. Efforts are presently underway to delineate the specific components of this repertoire. Falender et al. (2004) describe the basic competencies necessary for supervision: knowledge, skills, values, social context overarching issues, training of supervision competencies, and assessment of supervision competencies (p. 778). However, this work is foundational, and training programs are currently not required by state accrediting agencies or the APA to adhere to this framework. One promising example of this kind of research is a recent review conducted by Hoffman, Hill, Holmes, and Freitas (2005) which examined how feedback is given in supervision, why some feedback is difficult to give, and the possible implications of not giving feedback to supervisees. One conclusion from this review was that difficult feedback is often related to the boundaries of supervision itself, and therefore training regarding supervision boundaries would be helpful.

Teaching is another role undertaken by clinical child psychologists. While many students in doctoral psychology programs have an interest in pursuing an academic career, most do not receive formal training in instruction (Wimer, Prieto, & Meyers, 2004). Wimer et al. (2004) review the literature on the scholarship of teaching, which indicates that overall the training for teaching in the field of psychology is cursory and inconsistent across programs, often lacks an assessment process to ensure adequate training, and lacks appropriate follow through when the student actually begins teaching. Wimer et al. also describe and review research supporting the acquisition of effective teaching skills, including seminars and coursework, "microteaching," videotaped feedback, and mentoring with regard to specific teaching skills such as syllabi preparation.

2.2.3.5 Management and Administration

Historically, managers and administrators in the field of clinical psychology have "risen up from the ranks" of their peers over time with little or no formal training related to their leadership position. Similarly, training programs often give little attention to the business skills needed to run a practice. While Rodolfa et al. (2005) include *management and administration* as a core competency requiring specific training, there are in fact very few programs currently that formally address this competency within the curriculum (O'Mahen & Sloan, 2006). Some recent graduates and faculty, within programs offering management and administration, with applied experience

(i.e., practicum or internship) have published descriptions of their framework (Campbell, Buhrow, & Liebscher, 2000; O'Mahen & Sloan, 2006; Zvolensky, Herschell, & McNeil, 2000). For example, a management practicum experience developed at George Fox University in Newberg, Oregon, details the training objectives and methods in the two broad areas of clinical management and administrative management (Campbell et al., 2000). Clinical management training objectives include practice-oriented skills such as clinical supervision, client case-load management, and training new counselors. The authors also present administrative training objectives that pertain to the systems or organizational level, including working with and developing constituencies, understanding organization funding, and developing programs and policies (Campbell et al., 2000). Zvolensky et al. (2000) similarly describe a 1-year graduate assistantship in administration in which the graduate student is mentored by the director of clinical training. The training objectives of this assistantship are broadly defined as acquiring the content knowledge and skills needed to function in the capacity of a director. The student acquires knowledge regarding training models, accreditation guidelines, policies, ethical guidelines, and broad social issues that impact the field. Additionally, the student is expected to gain experience and skill in organizational and administrative tasks, written communication, program review and evaluation, and understanding how to conduct oneself professionally in an administrative role.

2.2.3.6 Reflective Practice and Self-Assessment

Rodolfa et al. (2005) provide the following definition of a competency in reflective practice and self-assessment: "Practice conducted within the boundaries of competencies, commitment to lifelong learning, engagement with scholarship, critical thinking, and a commitment to the development of the profession." The notion that self-assessment might serve as a core element of clinical training is based on several assumptions. The first assumption is that no matter how specialized a graduate training program may be actual practice will require knowledge and skill that is even further specialized. The second assumption is that as one remains in the profession, new advances in the field will require continued education. State licensure renewal often requires some continuing education; however, this is not required in all states. The third assumption is that psychology's value will continue to expand into a number of other fields and markets, such as clinical health psychology (Belar et al., 2001), requiring one to apply self-assessment techniques in order to acquire the skill and knowledge to match these new opportunities.

While many have described graduate training as "learning how to learn," Belar et al.'s (2001) description of the need for graduate coursework in self-assessment perhaps exemplifies this idea best. These authors describe a template of self-assessment that goes beyond a student's graduate training and can be used throughout their professional career. This template addresses a number of questions that relate to prerequisite knowledge and skill in several core domains. For example, questions may consist of assessing one's knowledge of the biological bases of diseases and cognitive bases of behavior. This model is derived from the biopsychosocial approach and emphasizes the interaction between biological, cognitive, affective, and social processes as they relate to a client's physical and mental health. The authors also offer a number of resources (journals, handbooks, public policies, etc.) as well as activities (contacting relevant colleagues, performing literature reviews, creating peer learning groups, etc.) that can fulfill the ongoing training needs identified through self-assessment (Belar et al.).

2.3   Expert Competencies

The "Basic Competencies" section of this chapter is meant to be an inclusive grouping of the many competency domains suggested by Roberts et al. (1998), Spirito et al. (2003), and Rodolfa et al. (2005). However, it could be argued that some of the domains listed above are actually expert competencies. For example, *disease process and medical management* may not represent a core competency for all clinical child psychologists, but rather an expert competency for those specializing in pediatric psychology. Also, though most would agree that *scientific knowledge and methods* is a core competency necessary for all clinical child psychologists, some might argue that the *research and evaluation* competency is an expert competency for those taking positions in academia. Similarly, the *supervision and teaching* and the *management and administration* competencies could also be considered expert competencies, as these two competencies require that the clinical child psychologist be fairly competent in all of the other areas first.

There is a developmental progression relevant to all of the competencies discussed. That is, clinical child psychologists begin as novices and (ideally) develop increasing levels of competence, though perhaps at different rates for each competency. As noted previously, Rodolfa et al.'s (2005) cube model defines five stages of professional development for psychologists: (1) doctoral education, (2) predoctoral internship, (3) postdoctoral supervision, (4) residency/fellowship, and (5) continuing competency. Rodolfa et al. also suggest these basic stages could also be broken down into more discrete stages. For example, the first stage (doctoral education) is one of the stages where the greatest amount of change occurs. Ideally, competencies in clinical child psychology grow considerably throughout the doctoral education. First-year graduate students begin with a full course load and may obtain an initial practicum experience. Thus, early forms of training for most of the competencies include lectures, seminars, videotapes, directed readings, and other related course work (Spirito et al., 2003). Regarding applied experiences, Spirito et al. also endorse the "see one, do one, teach one" (p. 88) model. That is, training experiences in a practicum setting include observing more experienced clinicians at work and then being supervised while working with clinical cases. As students progress through doctoral training, they may also obtain experience in training more recent entrants to the program. By the end of their doctoral training, students typically have experienced a range of general courses, electives, and practica, and students in Ph.D.-granting programs have taken the lead on at least one major research project. Thus, significant development toward expertise occurs during graduate training.

The second and third stages presented in the cube model (i.e., predoctoral internship and postdoctoral supervision) represent periods in the training of clinical child psychologists where significant development may occur in a short amount of time. That is, the predoctoral internship lasts 1 year, and postdoctoral supervision and training typically lasts about a year or two. Additionally, most clinical child psychologists omit the fourth stage (i.e., residency/fellowship), but it does provide another possible opportunity for further development. The relative rapid progression through the predoctoral internship and postdoctoral supervision stages has been identified as a particularly important time for the training of clinical child psychologists. On this point, and in addition to their ten proposed competencies, Roberts et al. (1998) recommend that training programs provide "specialized applied experiences" for aspiring clinical child psychologists. Specifically, they advise that these experiences emphasize the ability of the psychologist to adapt by learning to work with children that vary in terms of age, ethnicity,

and clinical problems (e.g., internalizing, externalizing, and developmental problems), as well as children that are treated in diverse settings (e.g., such as clinics, schools, and hospitals) using varied assessment and intervention methods. They also suggest that the training experiences involve professionals from other disciplines, such as pediatricians, social workers, teachers, and other types of therapists. Furthermore, Roberts et al. emphasize that these specialized applied experiences be supervised by psychologists with competence in the aforementioned competencies. Thus, a critical feature of the Roberts et al. model is that a range of specialized applied experiences, with increasing independence, will promote the needed adaptability of the clinical child psychologist. Adaptability and independence are hallmark features of expertise.

The last stage of the cube model (continuing education) also presents opportunities for competency development (Rodolfa et al., 2005). This stage begins with the end of postdoctoral supervision (or residency/fellowship when applicable) and continues through retirement. Thus, the last stage may span 30 years or more. As should be evident from this chapter, there is no single universally agreed upon model of core competencies. Even if the broader field of professional psychology or the narrower field of clinical child psychology is able to reach a universally accepted model, there will come a time when that model is outdated due to advancements and other changes in the field. Similarly, even if a practitioner is deemed "competent" today, there is no guarantee of continued competence. This point is emphasized by Falender and Shafranske (2007), who describe competence as a dynamic, rather than static construct. The dynamic nature of competence will therefore require significant continuing education in clinical child psychology.

One issue that is not addressed by the cube model is competency as it relates to the granting of a terminal master's degree in clinical psychology. Hays-Thomas (2000) discusses some of the "pros and cons" of the terminal master's degree in psychology. On the con side, some believe that a master's degree is insufficient training for independent practice, and some authors view mental health care providers with a master's degree as a low-cost competitor to doctoral-level psychologists. On the pro side of terminal master's programs in psychology, there are several other types of professionals with master's degrees providing psychological services. For example, social workers, art therapists, and counselors can be licensed (and can independently bill insurance companies for psychological services), within their respective professions, with a master's degree. Therapists with a master's degree in clinical psychology, on the other hand, cannot be licensed as a psychologist in most states. Some proponents of terminal master's degree programs have argued the value of a specific license for master's level psychologists (Hay-Thomas, 2000). This debate is particularly relevant when discussing competencies. Should master-level therapists have the same basic competencies as a doctoral-level psychologist? If not, which competencies would be different? In many states, professionals with a master's degree in psychology can be licensed as a psychological associate (or with a similar title) but still need supervision from a doctoral-level psychologist. Thus, in these states supervision would be an important competency for the doctoral level but not the master's level.

As part of defining expertise, it is also important to consider how to assess basic and expert competencies. As recently as 2005, Roberts, Borden, Christiansen, and Lopez asserted "we chose not to delineate *how* competence should be measured. Instead, key principles and considerations were articulated as necessary for the development of processes and measures to assess trainees' and professionals' competence" (p. 356). Nevertheless, Roberts et al. make

a number of suggestions that could lay the groundwork for future efforts to evaluate the competencies assembled here. First, competency assessments should attempt to foster a link between formative and summative competence. For example, ongoing formative assessments of competencies should relate meaningfully to summative, "end stage" assessments of competence such as oral examinations or dissertation defenses in which the young professional is deemed to have "passed or failed." To facilitate this, important clinical values and attitudes must be assessed, while change in assessment, intervention, and therapy skills would also need to be monitored. Development of important clinical skills might be monitored by clinical supervisors on a weekly basis, whereas changes in attitudes and values could be measured programmatically on an annual (summative) basis. Unfortunately, the "best methods" for assessing the competencies presented here have scarcely been evaluated and might vary greatly depending upon the nature or type of skills being assessed.

Though Roberts et al. (2005) stop short of making specific methodological recommendations for the assessment of clinical child psychology competencies, they identify a number of potentially worthwhile approaches. Among their recommendations were "360-degree" assessments commonly found in business environments. Such evaluations typically involve "feedback" on performance from coworkers, supervisors, and subordinates. Another recommendation involves the use of "standardized patients," a method of competence assessment sometimes employed in medical school settings that might be very well suited to the evaluation of assessment and intervention competencies. A variation of the use of standardized patients may be the development of standardized "role plays" or "simulations" of clinical situations. For example, a graduate student could be asked to provide simulated feedback from a recent psychoeducational evaluation to an anxious parent. Other techniques for facilitating assessment of competence might involve the use of self-assessments and the development of clinical or research portfolios.

2.4   Summary

This chapter presented and integrated three competency models in clinical child psychology, pediatric psychology, and the broader field of professional psychology. Throughout the chapter, many distinctions between clinical child psychology and clinical adult psychology were made, and pediatric psychology was conceptualized as a subspecialty of clinical child psychology. There was considerable overlap between the three competency models, and an attempt was made to integrate the unique competencies included in each model. The integrated model included 17 competencies that were placed in one of three broad domains. The *conceptualizing psychological health* domain includes: (1) child, adolescent, and family assessment, (2) life span developmental psychology, (3) life span developmental psychopathology, (4) diversity issues, (5) social issues, and (6) disease process and medical management. The *promoting psychological health* domain includes: (7) intervention strategies, (8) relationships, (9) prevention, family support, and health promotion, (10) role of multiple disciplines and service delivery systems, and (11) consultation and liaison roles. Finally, the *scientific and professional issues* domain includes: (12) scientific knowledge and methods, (13) research and evaluation, (14) professional, ethical, and legal issues, (15) supervision and teaching, (16) management and administration, and (17) reflective practice and self-assessment. Although there is no

universally agreed upon competency model for clinical child psychology, this integrated group of competencies appears to be a promising way to foster continued conversation about child clinical training.

This chapter also included some discussion of expert competencies, though there has been much less discussion of expert competencies in the literature. Some of the basic competencies reviewed may be viewed specialized or expert competencies (e.g., disease process and medical management, management and administration) that may not necessarily be a core competency necessary for all clinical child psychologists. It is also important to note that some of the competencies have been described as *cross-cutting* competencies that can be integrated within all of the other competencies (Rubin et al., 2007). For example, the competency in diversity issues influences competencies in assessment, treatment, and research. In fact, none of the competencies stand alone. Any two competencies taken at random have an important relationship together, thus expertise might truly come from being able to integrate competencies. That is, assessment and intervention are two distinct competencies; however, expertise comes from being able to effectively use the assessment to design and modify the intervention. Furthermore, other influences shape both the assessment and intervention, such as developmental, sociocultural, interdisciplinary, and ethical factors that have been identified through research.

As clinical child psychology begins to address these competencies, much more attention will need to be devoted to the assessment of competency. For years, graduate programs, internships, and postdoctoral training programs have approached competency assessment idiosyncratically. Grades typically serve as proxies for content knowledge, and grades and feedback (sometimes written and/or oral) are typically given for practice and internship performance. High-stakes examinations such as clinical competency exams, and oral or written final examinations are also offered in many programs prior to formal acceptance for doctoral degree candidacy or prior to approval for the predoctoral internship. Research competencies are typically assessed indirectly through acceptance of research proposals and successful defenses of master's theses and doctoral dissertations. After graduate training, internship, and postdoctoral work, psychologists must also take the Examination for the Practice of Professional Psychology (EPPP) to practice independently. The EPPP covers several (but not all) of the competencies discussed in this chapter. A major limitation of the EPPP is that it assesses knowledge, but not the more functional aspects of service delivery (e.g., clinical skills). Also, after early career psychologists pass the EPPP, there is little if any way to assess professional competence.

Leigh et al. (2007) discuss possible models for the assessment of ongoing competence for practicing psychologists. Some of the possibilities include measures of: (a) knowledge, (b) decision making, (c) performance and personal attributes, and (d) practice-based skills and tasks. Though the need for continued assessment of child psychology competencies seems obvious, there seems to be little data to support this assertion. Do child therapist competencies erode? Do research competencies require updating? Should the profession allow for increased specialization (which would entail the loss of some competencies in favor or potentially, highly specialized competencies)? Interestingly, the answers to the questions posed above, require the adoption of what Roberts et al. (2005) called a "culture of assessment" to develop around the existing "culture of competence." Whether a culture of assessment develops will determine in large part how future debates about clinical competence in child psychology evolve.

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3 Ethical and Legal Issues

Genevieve L. Y. Arnaut · Dave A. Hill

Abstract: The ability to identify, understand, and resolve ethical and legal issues is an important competency for clinical psychologists. In this chapter we provide basic definitions of this ethical and legal territory and provide a rationale for why every psychologist must pay careful attention to this area, including providing competent services as well as meeting a minimum standard of care as part of risk management. We next give an overview of basic competency in this area, based on the National Council of Schools and Programs in Professional (2007) and Assessment of Competency Benchmarks Work Group (2007) approaches to competency as a psychologist. Both approaches highlight the fact that ethical and legal issues are present from the very beginning of training in clinical psychology and that a developmental course in competence is expected. The models complement each other in that one offers a view of ethics and legal issues as a general foundational competency underlying all of a psychologists (or trainee's) activities, whereas the other model points to knowledge, skills, and abilities required in specific areas of practice. Subsequently, we consider aspects of competency that might be required of an expert (i.e., a psychologist entering professional practice): the ability to identify and sort through complex ethical and legal issues as well as to access resources for resolving these issues, and the application of one particular resource – ethical decision-making models – to resolve dilemmas.

3.1 Overview

Ethical and legal issues form part of the fabric of every clinical psychologist's daily activities, and the ability to identify and resolve these issues is an important aspect of professional competency. As such, ethical reasoning and judgment as well as knowledge of legal standards have figured prominently in two large-scale efforts to identify and provide measurable indices for competencies in clinical psychology: the Competency Developmental Achievement Levels (DALs) developed and approved by the membership of the National Council of Schools and Programs in Professional Psychology (NCSPP, 2007) and the Assessment of Competency Benchmarks Work Group convened by the American Psychological Association (APA) Board of Educational Affairs (Assessment of Competency Benchmarks Work Group, 2007).

In this chapter, we first provide some basic definitions of the ethical and legal territory we will be addressing. We then give an overview of the basic competency required in this area, based on the NCSPP (2007) and Assessment of Competency Benchmarks Work Group (2007) approaches. Subsequently, we consider aspects of competency that might be required of an expert: the ability to identify and sort through complex ethical and legal issues as well as to access resources for resolving these issues, and the application of one particular resource – ethical decision-making models – to resolve dilemmas.

3.1.1   Basic Definitions

According to the APA Committee on Professional Practice and Standards (2003), ethics "is defined as the rules or standards governing the conduct of members of a profession" (p. 595), whereas legal issues derive from "the body of rules governing the affairs of persons within a community, state, or country" (p. 596). Legal issues can be addressed through reference to state and federal statutes, state administrative regulations, and case laws. The primary resource for standards of conduct for psychologists is the APA's (2002b) Ethical Principles of Psychologists and Code of Conduct (referred to hereinafter as the Ethics Code). The Ethics Code contains five aspirational general principles (Beneficence and Nonmaleficence, Fidelity and Responsibility, Integrity, Justice, and Respect for People's Rights and Dignity). In addition, the Ethics Code contains ten ethical standards that are presented as obligations in the following areas: (a) Resolving Ethical Issues, (b) Competence, (c) Human Relations, (d) Privacy and Confidentiality, (e) Advertising and Other Public Statements, (f) Record Keeping and Fees, (g) Education and Training, (h) Research and Publication, (i) Assessment, and (j) Therapy.

An additional basic resource for psychologists with respect to specific areas of psychological practice is found in the practice guidelines (APA, 2002a). For example, available practice guidelines include the *Guidelines for Psychotherapy with Lesbian, Gay, and Bisexual Clients* (APA, Division 44/Committee on Lesbian Gay, and Bisexual Concerns Task Force on Guidelines for Psychotherapy With Lesbian, Gay, and Bisexual Clients, 2000), *Guidelines for Providers of Psychological Services to Ethnic, Linguistic, and Culturally Diverse Populations* (APA, Office of Ethnic Minority Affairs, 1993), *Guidelines for Psychological Evaluations in Child Protection Matters* (APA, Committee on Professional Practice and Standards, 1999), and the *Specialty Guidelines for Forensic Psychologists* (Committee on Ethical Guidelines for Forensic Psychologists, 1991). Such guidelines are aspirational rather than mandatory or exhaustive and were created for the purposes of education and information (APA, 2002a). A more exhaustive discussion of resources is provided below.

The ability to resolve ethical and legal issues is important for several reasons. First, as noted above, standards in the Ethics Code (APA, 2002b) represent obligations for psychologists. Indeed, the first standard presented in the Ethics Code, Standard 1, requires that psychologists resolve ethical issues. In the second standard, Standard 2.01a, Boundaries of Competence are discussed: "Psychologists provide services with populations and in areas only within the boundaries of their competence, based on their education, training, supervised experience, consultation, study, or professional experience" (APA, 2002b, p. 1063). Thus, at the risk of presenting circular reasoning, it is clear that psychologists are required by the Ethics Code to work within the boundaries of their competence, and as we will see below, one aspect of competence is knowledge of ethical and legal issues.

These professional obligations are closely tied to the second reason that psychologists must be aware of ethical and legal issues: Psychologists may be subject to unfortunate consequences if they are found through investigation to have violated ethical or legal requirements. A violation of a legal requirement may result in an action against the psychologist's license (Bennett et al., 2006). In Oregon, for example, sanctions listed in the relevant statute include the following: denial of a license to any applicant, refusal to renew a license, suspension of the license for a period of not less than 1 year, issuance of a letter of reprimand, imposition of probation with authority to restrict the scope of practice of a psychologist or to require practice under supervision, revocation of the license, or imposition of a civil penalty not to exceed \$1,000 (Oregon Revised Statutes, 2007). Violations of Ethics Code guidelines that are not codified in state licensing law can

nonetheless serve as the basis for a complaint and subsequent action against a psychologist's membership in APA or a state or provincial psychological association (Bennett et al., 2006).

Failing to follow a professional standard of care may also result in a malpractice claim (i.e., a psychologist could be sued in a civil court for monetary damages). Bennett et al. (2006) listed four essential components of a malpractice claim: (a) there must have been a duty between the professional and the client, (b) there must have been damage to the client, (c) the professional must have deviated from professional norms (referred to as reasonable standards of care), and (d) there must be a direct link between the professional's behavior and the damage sustained by the client.

Thus, as Bennett et al. (2006) noted, when a psychologist has a professional relationship with a client, he or she incurs a duty to use a reasonable standard of care. The Ethics Code authors (APA, 2002b) provided a definition for the term "reasonable" with respect to ethical standards: "[T]he prevailing professional judgment of psychologists engaged in similar activities in similar circumstances, given the knowledge the psychologist should have had at the time" (p. 1061). However, the authors of the Ethics Code addressed the relationship between the Ethics Code and civil liability as follows:

► The Ethics Code is intended to provide guidance for psychologists and standards of professional conduct that can be applied by the APA and by other bodies that choose to adopt them. The Ethics Code is not intended to be a basis of civil liability. Whether a psychologist has violated the Ethics Code standards does not by itself determine whether the psychologist is legally liable in a court action, whether a contract is enforceable, or whether other legal consequences occur. (p. 1061)

In spite of the absence of a direct link between the Ethics Code and civil liability, it certainly behooves the prudent psychologist to be aware of prevailing standards of care. Bennett et al. (2006) stated that the incidence of malpractice claims had been relatively stable over the 10 years prior to publication of their book; however, in that same period, the risk of a licensing board complaint had increased greatly. Although the authors noted that an exact calculation of the number of ethics complaints is difficult for a number of reasons, they provided the following estimate: About 1% of psychologists experience a licensing board complaint or malpractice claim annually. Van Horne (2004) found a comparable estimate in a survey of all licensing boards in USA and Canada. For each year from 1996 to 2001, complaints were filed (but not necessarily investigated) for about 2% of licensed psychologists each year. Fewer than 20% of complaints led to disciplinary actions against a psychologist.

Certain areas of practice appear to carry with them higher risk than others. Based on data from the APA Ethics Committee for the prior 10 years, Bennett et al. (2006) provided the following ranked list of the most common types of disciplinary actions by the committee:

- Sexual misconduct (adult)
- Nonsexual dual relationship
- Insurance/fee problem
- Child custody
- Confidentiality
- Practicing outside competence
- Inappropriate follow-up/termination
- Test misuse
- Termination/supervision

- False, fraudulent, or misleading advertising
- Sexual misconduct (minor)
- Inappropriate response to crisis

Clearly, most of these behaviors are addressed directly in the Ethics Code (APA, 2002b). Therefore, by acting in accord with ethical standards, many malpractice claims and complaints to licensing boards may be avoided. Along these lines, Bennett et al. (2006) noted that ethical principles are the foundation of good risk management, and ethical principles and standards can guide behavior in situations where laws do not. In the next section, we discuss what is involved in gaining competence in this area.

3.2   Basic Competencies

Having demonstrated why a psychologist is obliged to gain competence in dealing with ethical and legal issues, we now address how such competence might be defined and measured. To do so, we explore how two psychological associations with a stake in the training of psychologists have conceptualized skills needed for competent ethical and legal reasoning and behavior across various stages of training and practice in psychology, from the beginning of graduate practicum training to either graduation or the beginning of independent practice.

In the NCSPP (2007) model, ethical and legal reasoning is considered to be an integral part of each of the seven identified competencies (relationship, assessment, intervention, diversity, research/evaluation, management/supervision, and consultation/education), rather than a separate competency. In the Assessment of Competency Benchmarks Work Group (2007) approach, however, skill in the area of ethical and legal standards and policy is considered to be a foundational competency in its own right, on equal footing with five other foundational competencies (reflective practice/self-assessment, scientific knowledge/methods, relationships, individual/cultural diversity, and interdisciplinary systems). These foundational competencies are conceptualized as a necessary base underlying an additional six functional competencies involved in functions or tasks that a psychologist carries out (assessment–diagnosis–case conceptualization, intervention, consultation, research/evaluation, supervision-teaching, and management/administration).

It might be noted that individual schools are not required by APA accreditation standards to adopt either of these models and in fact may modify them or develop their own (APA, 2008). Thus, for example, the faculty at our school (Pacific University School of Professional Psychology) adopted the seven basic competencies identified by NCSPP but elected to break out professional and ethical knowledge, reasoning, and judgment as a competency in its own right. We now turn to a discussion of these two approaches.

3.2.1   The Assessment of Competency Benchmarks Work Group Approach

The Assessment of Competency Benchmarks Work Group (2007) identified three aspects of competency in addressing ethical and legal issues: (a) knowledge, (b) awareness and application of ethical decision-making model, and (c) ethical conduct. For each of these three aspects, the

authors then considered three developmental levels: readiness for practicum, internship, and entry into practice. At each developmental level, the essential component of each skill was identified, as were behavioral anchors and assessment methods. We consider each of the three broad areas of competency in ethical and legal issues in turn.

3.2.2 Knowledge

Not surprisingly, the APA Ethics Code and legal resources/requirements figure prominently in the knowledge required at each of the three levels. As one prepares for practicum, only a "basic knowledge" of the APA Ethics Code is required, along with a "rudimentary knowledge of legal and regulatory issues" (p. 25). This knowledge is assumed to be shown and measured in coursework and class discussion.

As one prepares for internship, a "working knowledge" (p. 25) of the Ethics Code and legal sources is desired, and this level of knowledge is now measured through behavior and not just coursework. For example, a student is expected to identify ethical dilemmas, actively consult with supervisors, and include ethical and legal issues in case conceptualizations. The student should also recognize the limits of his or her own competence. Such knowledge is assessed through self, peer, and supervisor assessment; direct observation; ratings from clients; and comprehensive examinations.

By the time a candidate is ready to enter independent practice, he or she is expected to have a "routine command and application" (p. 25) of the Ethics Code and other ethical, legal, and professional standards and guidelines. The practitioner should be able to identify and analyze more complex legal and ethical issues and proactively address them. In addition, he or she should identify potential conflicts in ethical and legal issues and be aware of the needs to confront peers or organizations when the need arises. Behaviorally, this readiness is measured through performance in the Examination for Professional Practice in Psychology (EPPP) and regional jurisprudence examinations required for licensure as well as through supervisors' evaluations, self-evaluations, and client feedback.

3.2.3 Awareness and Application of Ethical Decision-Making Model

Turning to decision making, as students get ready for practicum, they should be able to recognize the importance of basic ethical concepts relevant to initial practice (e.g., confidentiality and informed consent). As with knowledge, this ability is again assumed to be displayed and measured in classwork and discussions. As students prepare for internship, they should be able to know and apply an ethical decision-making model to specific dilemmas. This skill is demonstrated behaviorally in supervision and other aspects of practicum (e.g., presentations). Proposed measurements include self- and supervisor evaluations, comprehensive examinations and oral evaluations, peer cases in group supervision, and creation of hypothetical ethical dilemmas and resolution.

At the time of entry into practice, the practitioner should also show a "commitment to integration of ethics knowledge into professional work" (p. 26). This commitment is measured by the inclusion of ethics in professional writing, research, teaching, and training. In addition, the entry-level psychologist should have a strategy for seeking consultation for resolving ethical

and legal dilemmas. Competency is measured by supervisor evaluations, self-evaluations, performance in regional exams and in the EPPP, peer review of writings, performance reviews, and in mock vignettes.

3.2.4   Ethical Conduct

The final area of ethical and legal issues, ethical conduct, involves displaying "ethical attitudes and values" (p. 28) as one prepares for practicum. Behaviorally, this could include the following: desire to help others, openness to new ideas, honesty and integrity, personal courage, appropriate boundary management, and implementation of ethical concepts into behavior. Note that, with the possible exception of the final item on the list, these attributes do not necessarily refer to professional but may reflect personal ethical attitudes and values. Assessment occurs through judgment by faculty and peers and evaluation of behaviors by the program.

At the time of entry to internship, the student is expected to have become more aware of the underpinnings (i.e., the moral principles and ethical values) of the ethical attitudes and behaviors that should already have been displayed prior to practicum. Behaviorally, this skill is seen in the student's abilities to identify and discuss his or her principles and values as well as to discuss areas where personal and professional values meet. The student and the supervisor assess the student's proficiency in this area, and the assessment also occurs through comprehensive examinations and demonstrated behavior and decision making in professional activities.

Finally, ethical conduct at the time of entry into practice ideally incorporates independent and confident integration of ethical and legal standards with the other functional and foundational competencies. Behaviorally, this skill is demonstrated when the practitioner shows an understanding of ethical and legal standards when engaged in functional competencies, demonstrates that decision making in ethical and legal realms "informs and is informed by all foundational competencies" (p. 28), and takes responsibility for continuing professional development in this area. Assessment occurs through supervisor ratings and feedback from colleagues, and competence is also seen in an absence of complaints and "willingness to serve professionally in the ethics arena" (p. 28).

3.2.5   The NCSPP Approach

As noted above, in the NCSPP (2007) model, ethics and professionalism are included under each of the seven competencies rather than being discussed as a separate competency. As was the case in the Assessment of Competency Benchmarks Work Group (2007) model, three developmental levels are addressed: beginning practicum, beginning internship, and completion of the doctoral degree. The first two levels match the Assessment of Competency Benchmarks Work Group approach. The third level, completion of the degree, was selected rather than readiness for practice in recognition of the fact that independent practice in most states begins at least a year after graduation due to postdoctoral requirements for licensure. NCSPP programs only have oversight of students in an official capacity through graduation rather than through licensure.

In addition to breaking up competency according to three levels of practice, the NCSPP (2007) workgroups also identified separate knowledge, skills, and attitudes required for competency at each developmental level in each domain. Unlike the Assessment of Competency Benchmarks Work Group (2007) model, there are no specific behavioral assessment methods tied to the knowledge, skills, and attitudes. Presumably, the requisite knowledge, skills, and abilities would be assessed in practicum settings, coursework, and examinations at a minimum. Because a discussion of all of these competencies would be exhaustive, examples from two representative domains – assessment and relationship – will be presented.

3.2.6 Assessment Competency

Ethical knowledge with respect to assessment that is required to begin practicum includes basic knowledge of ethical assessment, familiarity with ethical issues and potential conflicts, and familiarity with external resources (including supervisors). By the time a student goes on internship, she or he is expected to have a more thorough knowledge of legal and ethical principles and guidelines involved in assessment and knowledge of potential courses of action. By the time the doctoral degree is completed, the student is expected to have a "refined and sophisticated knowledge of ethical and legal issues related to assessment" (p. 7).

Skills desired at the time of entry into practicum include the abilities to support decisions about actions, differentiate self from client needs, and use supervision constructively. At the time of internship, a student is expected to have the ability to identify potential legal and ethical issues and address these in supervision. By the time of graduation, the student should be able to apply relevant legal and ethical principles to the assessment situation, seek consultation, make referrals based on legal and ethical principles, and "delineate limitations of assessment data sources" (p. 8).

In terms of attitudes, the student beginning practicum is expected to have respect for relevant ethical standards throughout the assessment process. By the time of internship, the student should have a willingness to critically examine test results with respect to both diverse populations and normative data and to examine the applicability of ethical and legal issues within diverse populations. At the time of graduation, the student ideally should be able to integrate respectful attitudes and objectivity into an ethical professional identity and lifelong learning.

3.2.7 Relationship Competency

Ethical knowledge related to relationship competency that is required to begin practicum includes a "basic knowledge of ethics" (p. 15). By the time a student goes on internship, she or he is expected to have an understanding of legal and ethical requirements of the profession and "how they relate to developing professional relationships" (p. 15), as well as knowledge of common ethical dilemmas they might encounter in populations with which they have experience. By the time the doctoral degree is completed, the student is expected to have adequate knowledge of recent judicial and legislative decisions relevant to complex ethical issues in relationships as well as understanding of the complex nature of ethical standards and guidelines and of models of ethical decision making with respect to relationships.

Skills desired at the time of entry into practicum include the abilities to identify and discuss some ethical issues in relationships and to be "self-reflective" (p. 15) under stress and in several areas: power/privilege, motivation, manipulation, cultural difference, and systemic context. At the time of internship, a student is expected to have the ability to articulate some level of comprehension of legal and ethical requirements and how they relate to professional relationships, to identify ethical dilemmas and associated relational issues, and to self-correct "inconsistencies in verbal and nonverbal behavior and in use of power" (p. 15). By the time of graduation, the student should be able to apply relevant legal and ethical principles across a variety of situations involving relationship issues, with boundaries identified as particularly important in this regard; consistently demonstrate "appropriate use of power in relationships" (p. 15); appraise and adopt a model of decision making and apply it with "personal integrity and cultural competence" (p. 15); and seek and provide consultation with respect to relationships.

In terms of attitudes, the student beginning practicum is expected to value ethical behavior, basic self-care, care of others, and the role of training and the profession of psychology, as well as to respect the self, others, and the profession. By the time of internship, the student should recognize others' "autonomy and differences" (p. 16) and demonstrate respect for self and others and the profession, both verbally and nonverbally. At the time of graduation, the student ideally should value social justice, should have internalized both the Ethics Code and "sense of principled judgment" (p. 16) and be able to apply them as needed, and should value lifelong learning about relationships and ethics.

3.2.8 Comparing the Two Approaches to Competency

As one can see from the above descriptions, there are some basic similarities between the NCSPP (2007) and Assessment of Competency Benchmarks Work Group (2007) approaches. First, both work groups clearly saw the need to differentiate competencies according to professional development level, with the student/practitioner becoming more independent over time as well as developing more sophisticated analytic and decision-making skills. Implicit in this acknowledgement of the need to develop and refine skills over one's professional career is a recognition of the complexity of decision making in this arena. Second, both groups also recognized that competency in this area is multifaceted and requires a variety of knowledge, skills, and abilities that can be differentiated and assessed. Third, both approaches clearly refer to an ability to identify, access, and use resources for ethical and legal decision making and behavior. The Assessment of Competency Benchmarks Work Group explicitly referred to the Ethics Code as a resource, whereas the NCSPP group did not, but the Ethics Code would clearly be a resource that is appropriate in the NCSPP system. Finally, both approaches refer to the ability to use ethical decision-making approaches to assist in resolving dilemmas.

One can also see some basic differences in approach. Developers of the Assessment of Competency Benchmarks Work Group (2007) model conceptualized ethics as a foundational competency that has similarities across many domains of functioning as a psychologist, whereas the NCSPP workgroups conceptualized ethics as, at least to some extent, being specific to the individual domains of competency. As a result, the NCSPP guidelines include content specific to each competency area, whereas the Assessment of Competency Benchmarks Work Group competencies are more general. Thus, for example, in the NCSPP approach, relationship ethics stress issues of power and autonomy that are not explicitly identified in the assessment

ethics. Similarly, valuing social justice was identified as an important attitude for ethical professional relationships but was not identified for ethical assessment practice.

The differences in these approaches may to some extent mirror the curriculum in many professional schools. Thus, for example, licensing laws require that a separate foundational ethics course be taken by a candidate for licensure (e.g., Oregon Administrative Rules, 2008), and APA (2008) requires that students be exposed to current knowledge in professional standards and ethics in their graduate clinical psychology curriculum. Yet, it is also quite likely that the licensure applicant took courses in which he or she also learned specific ethics related to certain work settings or populations. Thus, an assessment course will typically include discussion of ethical standards related to the development and application of assessment instruments, and a forensics course would likely contain discussion of appropriate specialty guidelines relevant for forensic practitioners.

Is either of these approaches to competency in ethical and legal issues preferable? Without clear research to guide us, an answer to this question would rest primarily on speculation. However, a reasoned response might suggest that neither is necessarily superior; just as a standard curriculum would include a foundational ethics course and additional instruction in ethics for given applications and populations, we might also expect that the practitioner should have some foundational skills, knowledge, and attitudes that can be applied across many situations as well as knowledge, skills, and attitudes that lend themselves to resolution of ethical and legal issues involved in work with specific applications and populations. In addition, evolving areas of practice that are impacted by new technologies such as the Internet may necessitate discussion regarding how established standards and guidelines apply in new contexts. This endeavor would be aided by reference to foundational principles that cut across specific applications, but – as will be discussed more fully below – it may also necessitate standards and recommendations specific to this new technology as well.

The two models of competency presented describe the desired developmental course from initial graduate practicum training through the point of finishing internship and/or readying to enter independent clinical practice. In the next sections, we discuss what is involved in becoming an expert in the areas of ethical and legal decision making as the individual moves into independent practice. Based on the models of competency discussed above, we believe that some areas of commonality across the two models point to the knowledge, skills, and abilities required for expert competence in this area. Thus, we discuss the acknowledged complexity of ethical and legal issues and the need to access appropriate resources for resolution of dilemmas. In particular, we look in depth at the use of one particular resource: the application of ethical decision-making models to specific situations as a means of resolution.

3.3 Expert Competencies

3.3.1 Complexities of Ethical and Legal Issues

One of the fundamental skills involved in resolving ethical and legal issues is an ability to identify and understand the complex ethical and legal issues in the first place. Miller (2008) provided a clear framework for ethical and legal issues that may be used as a first step in approaching this complexity. The four broad ethical issues discussed in this framework were competence, informed consent, confidentiality, and multiple relationships. Within each broad ethical issue,

Miller identified several components; for example, the broad issue of competence was comprised of five more specific skills: (a) selecting relevant assessment methods and devices, (b) administering and interpreting each assessment device, (c) integrating assessment information into testable hypotheses and diagnostic formulations, (d) utilizing evidence-based treatments, and (e) monitoring treatment outcomes. Miller identified three primary legal issues of concern to practitioners: duties to the profession of psychology (including practicing within one's scope of practice and maintaining clinical records), duties to clients (treatment issues and protection of client confidentiality), and duties to third parties.

Miller's (2008) straightforward approach is a useful distillation that at first glance might suggest that ethical and legal considerations can be relatively easily separated and identified. However, a closer look at Miller's careful analysis of these issues suggests that in practice such separation may not be readily achievable or apparent. For example, Miller noted that confidentiality is addressed in Standard 4 of the Ethics Code (APA, 2002b) but also commented that there may be legal requirements or exceptions to confidentiality. Along these lines, as noted above, many states have adopted the Ethics Code as part of the laws or regulations governing the practice of psychology in that state. Thus, if one is acting in accord with ethical principles, one may also be acting in accord with statutes or administrative regulations, which then blurs the distinction between ethical and legal issues.

A second complicating factor in distinguishing ethical and legal issues is that the opposite may be true; that is, in some cases, the law may not look to or follow ethical standards but may in fact conflict with such standards. In other cases, one compelling legal doctrine or law may supercede another. For example, a psychologist who receives a subpoena directing him or her to appear in court – along with therapy notes – to testify in a client's divorce case has to balance the ethical standard of confidentiality and parallel legal standard of privilege with a direct order from the court that contradicts these ethical and legal standards. In such cases, Standard 1.02 of the APA (2002b, p. 1063) Ethics Code states as follows:

► If psychologists' ethical responsibilities conflict with law, regulations, or other governing legal authority, psychologists make known their commitment to this Ethics Code and take steps to resolve the conflict in a responsible manner. If the conflict is unresolvable via such means, psychologists may adhere to the requirements of the law, regulations, or other governing authority.

Although the focus in this example is on legal standards, it might also be noted that the example also raises potential ethical and clinical issues. For example, the clinician must consider the potential harm to the client that may ensue if the information were to be disclosed in a public forum rather than remaining confidential. In addition, harm to the therapeutic relationship may arise if it was the opposing attorney who had called the therapist as a witness; the client may feel betrayed if the therapist were to testify in a manner that even inadvertently provided support to his or her ex-partner's case. Alternatively, if it was the client's attorney who called the therapist as a witness, the clinician may risk harm to the therapeutic relationship by *not* testifying or by testifying in a manner that is viewed by the client as hurting his or her case; the client may feel unsupported or betrayed by the therapist and not return to therapy.

The above example hints at another problem: Ethical principles and standards themselves may lead to unclear or even incompatible formulations of appropriate actions. For example, Standard A (Beneficence and Nonmaleficence) states: "Psychologists strive to benefit those with whom they work and take care to do no harm" (APA, 2002b, p. 1062). Applying this

principle in the case of child abuse reporting, one could conclude that verified or suspected child abuse should be reported in all cases to ensure that the child is safe. On the other hand, the same principle could also lead to the conclusion that one should not report the abuse unless danger is imminent because it might disrupt the therapeutic enterprise and potentially destroy trust, thereby harming the client (and/or child if the child is not the client). For this reason, between 40% and 66% of psychologists have indicated that they had failed to report at least one suspected case of child abuse (Applebaum, 1999). Clearly, psychologists' judgment of what constitutes ethical behavior in this instance varies greatly. It may even vary for the same psychologist across different clients, different clinical scenarios, or different employment contexts or states.

Child abuse reporting is not the only area in which psychologists' behaviors may deviate from ethical principles. Pope and Bajt (1988) surveyed 60 senior psychologists to explore times when a psychologist intentionally broke a law or formal ethical principle so as to uphold client welfare or another value. The authors found that 77% of the respondents believed psychologists should sometimes violate formal legal and ethical standards for client welfare and other deeper values. In addition, a majority of the respondents (57%) acknowledged having done so: 21% had refused to report child abuse, 21% had illegally disclosed confidential information, 9% had engaged in sex with a client, 6% had some form of dual relationship with a client, and 6% had refused to make legally mandated warnings regarding dangerous clients.

Other evidence suggests that, in general, psychologists' behavior is in line with their ethical beliefs. Pope, Tabachnick, and Keith-Spiegel (1987) surveyed psychologists about their beliefs about, and compliance with, ethical principles. For only 4 out of 83 items did psychologists tend to report that they engaged in a behavior that was viewed as ethically questionable (measured in this study as a behavior engaged in at a frequency that was greater than the frequency of times the behavior was identified as unethical). The four areas were discussing a client (by name) with a friend, discussing clients (without names) with friends, unintentionally disclosing confidential data, and providing services outside areas of competence. For most other items, psychologists' behaviors were generally consistent with ethical beliefs. However, ethical beliefs were not always clear; indeed, 12 of the 83 items appeared to pose difficult judgments in terms of how ethical they were (e.g., accepting goods rather than money for payment, avoiding certain clients for fear of being sued, sending holiday greetings to clients, allowing clients to run up a large unpaid bill).

These results are in line with Pope and Vetter's (1992) findings relating to ethical dilemmas faced by APA members in their work. From 679 psychologists, 703 ethically troubling incidents in 23 general categories were obtained. The most frequent dilemmas involved confidentiality, followed by blurred, dual, or conflictual relationships with clients. Payment issues, academic and training dilemmas, and issues in forensic psychology were the next most common concerns. Clearly, confidentiality and relationships with clients have been noted as a consistent concern across studies, and these are the most common areas in which psychologists deviate from ethical principles if they are going to do so. We might also note that these areas were also identified by Bennett et al. (2006) in their list of the most common types of disciplinary actions against psychologists, cited above, again suggesting that following ethical standards is a useful risk management tool.

Quite apart from any blurring of ethical and legal boundaries in codified principles and regulations or in contradictions between or among law and ethics, confusion may also originate in the clinician's own understanding or interpretation of a case. Consider the following

scenario: A 15-year-old girl has been in individual therapy for depression and attempts at self-harm. She tells her therapist that she is pregnant by her 20-year-old boyfriend and plans to obtain an abortion. The law in the therapist's state requires that a minor under 16 obtain consent from her parents to have an abortion. However, the client tells the therapist that she lied about her age and obtained a false identification card that she has presented to the family planning clinic. Further, she does not want the therapist to disclose her pregnancy to her parents because she believes that her father will beat her. The therapist has evidence that the father has previously physically abused a younger sibling. Finally, laws in the therapist's state allow the youth to receive individual therapy without consent of the parents, with the understanding that the parents will eventually be brought into the therapy situation. Complex clinical, ethical, and legal issues of potential harm to self by the client, reporting of child abuse, knowledge of potential criminal behaviors, concerns regarding confidentiality, and providing services to a minor clearly need to be considered as the practitioner considers what constitutes ethical behavior in this scenario, as well as what legal standards apply, let alone what clinical interventions to employ.

3.3.2   Resources for Resolution of Ethical and Legal Issues

Scenarios such as those given above are not unusual in the day-to-day work of a clinical psychologist. The Ethics Code (APA, 2002b) and practice guidelines assist the practitioner by providing basic guideposts for navigating through such sticky situations, and reference to these standards and principles is an important first step in resolution of a dilemma. A resource such as Barnett and Johnson's (2008) *Ethics Desk Reference for Psychologists* can be particularly useful at this stage. After citing each ethical principle and standard, the authors supplemented the Ethics Code with a summary of the concepts and intent of each principle, identification of common dilemmas and scenarios for each principle, and practical suggestions. They also included a model for ethical decision making, a checklist for psychologists facing an ethics complaint, recommendations for high-risk situations, and a list of ethics resources.

Practitioners wishing to explore a particular area in more depth may also find it useful to refer to discussions or recommendations for a specific problem or dilemma. Thus, for example, in the professional psychological literature, one can find discussions of ethical and legal issues that are common in working with certain populations, such as ethnic minorities (e.g., Hall, 2001; Lee, 2006) or clients of varied sexual orientations (e.g., Hermann & Herlihy, 2006; Israel, 2007; Kessler & Waehler, 2005). One can also find guidance for a wide variety of work settings or roles, such as rural practice (Campbell & Gordon, 2003; Turchik, Karpenko, Hammers, & McNamara, 2007), supervision and training (e.g., Fly, van Bark, Weinman, Kitchener, & Lang, 1997; Hamilton & Spruill, 1999; Sullivan & Ogloff, 1998; Vasquez, 1992), and forensic assessment (Heilbrun, DeMatteo, Marczyk, & Goldstein, 2008). Finally, many authors have addressed areas that touch on specific ethical standards from the Ethics Code in more depth, such as multiple relationships (e.g., Campbell & Gordon, 2003; Younggren & Gottlieb, 2004), assessment (Cates, 1999; Rupert, Kozlowski, Hoffman, Daniels, & Piette, 2008), and confidentiality (Barham, 2007; Smith-Bell & Winslade, 2008). Clearly, this list is but a tiny sampling of a myriad of ongoing research and discussion in many areas of practice.

Such literature is important in a fast-changing world because new conundrums can arise at any time. For example, telephone therapy (Haas, Benedict, & Kobos, 1996) and Internet use

(Behnke, 2008; Naglieri et al., 2008) have created new ethical dilemmas. It is not always immediately obvious how established standards apply in these new contexts, and the literature provides a valuable resource for practitioners. In addition, resources such as APA publications and Web sites can also be helpful. For example, the APA Web site contains a specific statement regarding services by telephone, teleconferencing, and Internet formulated by the Ethics Committee of the APA (1997), in which it is noted thus:

► The Ethics Code is not specific with regard to telephone therapy or teleconferencing or any electronically provided services as such and has no rules prohibiting such services. Complaints regarding such matters would be addressed on a case by case basis. Delivery of services by such media as telephone, teleconferencing and internet is a rapidly evolving area. This will be the subject of APA task forces and will be considered in future revision of the Ethics Code. Until such time as a more definitive judgment is available, the Ethics Committee recommends that psychologists follow Standard 1.04c, Boundaries of Competence, which indicates that "In those emerging areas in which generally recognized standards for preparatory training do not yet exist, psychologists nevertheless take reasonable steps to ensure the competence of their work and to protect patients, clients, students, research participants, and others from harm."

In addition to the Ethics Code, practice guidelines, and psychological literature, one's colleagues (virtual or real) can also provide a substantial amount of support and wisdom. Web sites such as that established by Ken Pope (http://kspope.com/) have a wealth of resources with respect to ethics and legal issues. Continuing education can address ethical dilemmas related to specific work contexts, tasks, or client populations. In some states, formal work groups have been established. Along these lines, Knapp and Lemoncelli (2005) discussed the role of state psychological organizations in promoting ethical practice; in particular, they identified the Pennsylvania Psychological Association Ethics Committee, along with other committees, as assisting in that endeavor in their own state.

In our state of Oregon, an Ethics Committee similarly comprises one of the standing committees of the Oregon Psychological Association. This committee is composed of up to 9 practicing psychologists and 2 students, for a total of 11 members. Although when it was initially formed the committee made recommendations for adjudication of psychologists, it currently serves only a consultative function for psychologists, students, and the general public. An individual from any of these constituencies can contact the committee confidentially to seek input about a concern. The committee members help the caller identify the ethical issues inherent in the concern and provide advice about how to proceed. As a member of this committee, I (the first author) have found that one of the most common issues encountered is the caller's confusion about what the ethical issue actually is. Indeed, the committee members routinely spend time sorting out the ethical, legal, and clinical issues in any given scenario before offering any guidance. The facts that such a committee exists, is well-used (even by seasoned practitioners), and both callers and committee members grapple with identifying the appropriate ethical issues and sorting them out from other concerns attest to the complicated nature of such inquiries. It also reinforces the notion that ethical reasoning and knowledge of legal standards are lifelong developmental endeavors at which one can always become more competent.

In this section, we have identified sources of complexity in the analysis of ethical and legal issues, and we have pointed to some valuable resources for sorting through the complexity. It is interesting to note that Pope et al. (1987) found that the resources identified by psychologists as most helpful in resolving ethical dilemmas were colleagues, the APA Ethics Code, and

internship training, and the least helpful were identified as state and federal laws, published research, and local ethics committees. Whether this ranking remains current 20 years later remains an open question.

As noted by many authors (e.g., Barnett & Johnson, 2008; Knapp & VandeCreek, 2006) and in the NCSPP (2007) and Assessment of Competency Benchmarks Work Group (2007) conceptualizations of competency and successful resolution of legal and ethical issues are best guided by the use of ethical decision-making models. In the next section, we discuss several decision-making models that can be used both as a foundational way of conceptualizing ethical and legal issues as well as a model to apply to specific cases.

3.3.3   Ethical Decision-Making Models

As noted above, many resources are available to psychologists for resolution of ethical and legal dilemmas. Although the most basic resources – laws, the Ethics Code (APA, 2002b), and practice guidelines – provide rules and standards to guide psychology practice, they do not contain procedures or ways to make sense of all complex ethical, legal, and clinical issues. One approach that has been put forward to sort out these issues is the use of ethical decision-making models. Several models of ethical decision making exist in the ethics literature that may be helpful both for students to learn in the course of an ethics curriculum as well as for practitioners to apply in actual practice. We now examine how these models have been developed, compare their strengths and weaknesses, and evaluate their usefulness for clinical practice.

Several approaches to ethical reasoning have been proposed to guide the creation of ethical decision-making models. Principle-based ethics involves upholding moral principles, unless two moral obligations come into conflict. When this occurs, one moral obligation may be superior to another, depending on the situation (Knapp & VandeCreek, 2006). In the domain of medical ethics, Beauchamp and Childress (2001) identified four moral principles for practitioners to follow: justice, beneficence, nonmaleficence, and respect for patient autonomy. For psychologists, two other moral principles have also been suggested: fidelity and public responsibility (Knapp & VandeCreek, 2006). Compared to principle-based ethics, virtue ethics focuses on an individual's character and motives. This ethical theory may help psychologists deal with ethical dilemmas that evoke strong emotions (Knapp & VandeCreek, 2006). No matter what ethical theory psychologists prefer, ethical decision-making models can guide their actions in response to an ethical problem. We now describe the first of four models of ethical decision making presented in this section.

The Five-Step Model. Ethical decision-making models typically include several steps practitioners should follow when confronting an ethical problem. Knapp and VandeCreek (2006) described a five-step model for ethical decision making (shown in ❯ Table 3.1). Although this model can be used to make decisions stemming from different ethical theories, Knapp and VandeCreek focused on using the five steps in the context of principle-based ethics.

The first of the five steps, identify or scrutinize the problem, involves figuring out what ethical quandary or conflict is present (Knapp & VandeCreek, 2006). This could include taking note of Ethics Codes or laws that seem relevant, as well as what moral principles are in jeopardy. A psychologist might also determine the moral obligations he or she has to different people or groups in a given situation.

◼ **Table 3.1**

Five-step model of ethical decision making (Knapp & VandeCreek, 2006)

1	Identify or scrutinize the problem
2	Develop alternatives or hypotheses
3	Evaluate or analyze options
4	Act or perform
5	Look back or evaluate

In the second step, Knapp and VandeCreek (2006) propose that psychologists should come up with alternatives or hypotheses to resolve the ethical problem. To facilitate this process, psychologists need to be aware of cognitive and emotional factors that could help or hinder their ability to create solutions for ethical dilemmas. Being very rigid or emotional about a certain issue could lead practitioners to generate solutions that are not optimal for all people involved in a given situation. To assist the decision-making process, Knapp and VandeCreek also recommend that psychologists consult with colleagues or supervisors during this second part of the five-step model. Consultation is an essential element for ethical decision making that can help clinicians see issues from others' perspectives and become aware of their blind spots in different situations.

In the third phase of the process, psychologists should evaluate or analyze their options in a particular case (Knapp & VandeCreek, 2006). Once several options have been listed, psychologists should consider the advantages and disadvantages of each solution. These authors suggest that psychologists use their creativity to combine the best parts of the available alternatives into a new solution. This new integrative option should also be evaluated before it is implemented. In the context of principle-based ethics, the best option balances the moral principles involved in the ethical dilemma under consideration.

The fourth step in this model is to take action or complete the selected solution (Knapp & VandeCreek, 2006). In this stage of the decision-making process, the way in which a solution is put into place is also an important variable to keep in mind. When a psychologist acts to resolve an ethical conflict, decreasing harm to the moral principles involved takes a certain amount of skill. The authors also mentioned that even when a decision is reached, implementing the solution may not follow if the action continues to oppose what is thought to be the most moral or ethical response.

The final phase of the five-step model involves looking back or evaluating the option that was used to combat the ethical problem. Knapp and VandeCreek (2006) commented that this critical analysis should include an assessment of whether the decision has a chance of success and was made in an objective manner. In addition, the decision should be reached with no morally favorable option being accessible. Although this step normally puts an end to the ethical problem, sometimes evaluating the decision may point to other interventions being necessary.

The five-step model appears to have several strengths. First, it is easy to learn and can be supplemented with other steps for complex ethical dilemmas (Knapp & VandeCreek, 2006). Second, it includes a step designed to evaluate the success of the selected solution. This step may encourage psychologists to continually evaluate the outcome of the ethical decision-making process to benefit all parties involved and minimize harm to moral principles. Third, the five basic steps provide a framework for more lengthy and detailed models of ethical decision making that have been developed in more specialized areas of clinical psychology.

Fourth, this approach can be used to make decisions based on different ethical theories (e.g., principle-based or virtue ethics).

Looking carefully at the five-step model also exposes several areas in which it could be improved. In particular, this model has not been empirically tested in studies or surveys of professional psychologists. The current focus on evidence-based psychological practice suggests that ethical decision making should also be empirically analyzed in some way. Furthermore, in emergency or crisis situations, lack of time may prevent clinicians from being able to use a model that requires a certain amount of thinking and deliberation. Finally, reaching a solution with the five-step model seems to occur without identifying the individuals, groups, or organizations with a vested interest in the situation and who will be directly affected by the outcome.

The Narrative Model. The narrative model of ethical decision making is another alternative for psychologists to use when confronted with an ethical problem. This approach stems from previous literature on narrative ethics and feminist ethics (Sturm, 2002). In a narrative approach to ethics, ethical behavior and decision making are looked at within the entire context and personal experience of the lives of individuals and groups (Nicholas & Gillett, 1997). In particular, the ethical decision-making process includes negotiation for the values of the people involved (Hill, 2004). Narrative methods may also be helpful for psychologists to take the perspective of clients or other people affected by an ethical dilemma (Sturm, 2002). Understanding the point of view of others who are involved in an ethical conflict can be useful when the relevant stakeholders have less social or organizational power. Sturm contended that narrative ethics can assist psychologists in difficult ethical situations where human diversity factors (e.g., gender, ethnicity, class, sexual orientation) are involved. The narrative model of ethical decision making is shown in ⊙ Table 3.2.

Identifying the relevant clinical, legal, and ethical issues appears to be an appropriate first step to address any ethical problem. In many ethical conflicts, legal, ethical, and clinical issues are present and often meld together in ways that need to be sorted out before moving forward. The narrative approach deals with this aspect of ethical decision making directly and at the beginning of the process. The second step, to identify alternative courses of action, is very similar to the second part of Knapp and VandeCreek's (2006) five-step model described above. This phase of the process must happen before making a decision or taking action. The third step, to identify the relevant stakeholders in the situation, forces psychologists to look at the issues from the perspective of others. Using the therapeutic skill of empathy to broaden the view of an ethical dilemma may benefit all of the involved parties.

Sturm (2002) posited that using a narrative approach to help teach ethical decision-making skills has several benefits. First, the narrative method may help psychologists reflect on their own ethical values and principles. Second, perspective taking may assist practitioners in working with individuals from diverse cultural backgrounds. Third, psychologists working on interdisciplinary teams with other professionals may be able to use the narrative model effectively to discuss ethical problems in a group setting. Finally, the narrative approach may help clinicians

◼ **Table 3.2**

Narrative model of ethical decision making (Sturm, 2002)

1	Identify relevant clinical, legal, or ethical issues
2	Identify at least two alternative courses of action one might take in the case
3	Identify the relevant stakeholders

increase their cognitive flexibility when pondering ethical quandaries. In conjunction with Sturm's points, the narrative model's best feature appears to be taking the perspective of others and considering the impact any decision may have on all the people involved in the ethical dilemma at hand.

Along with the benefits described above, the narrative model has some disadvantages as well. The most glaring drawback of this model is that it stops short of taking action or implementing a decision regarding the ethical conflict. Although action may not be necessary in all situations, legal and ethical issues often require psychologists to make decisions to minimize harm to their clients. The narrative model also does not contain any procedure for critically evaluating the decision-making process or the subsequent course of action. This part of the process seems essential for psychologists in order to assess whether the ethical decision-making model they are using is working or needs to be amended in the future. Like the five-step model, the narrative model has not been empirically tested in the ethics literature. Future work should evaluate whether psychologists view the narrative approach as a valuable tool in the ethical decision-making process.

Forensic Psychology Model. In specialized areas of psychology practice, existing ethical decision-making models have been modified to apply to pertinent ethical situations. For example, Bush, Connell, and Denney (2006) added several steps to Knapp and VandeCreek's (2006) five-step model to address ethical decisions in forensic psychology. This forensic model has eight steps and is shown in ◉ Table 3.3.

Compared to the five-step model, these authors added three new steps to aid forensic practitioners in ethical decision making. Specifically, the second, third, and fourth steps of Bush et al.'s (2006) model are not included in the five-step model. The second step involves looking at the context and setting in which the psychologist is practicing. Depending on the organization or institution, a forensic psychologist may have obligations to different parties. These may include attorneys, the court, the trier of fact, and the examinee or patient (Bush et al., 2006). The third step of the model, to identify and use legal and ethical resources, is also new. Bush et al. go on to describe the available resources that forensic practitioners should use. Psychologists should first assess the fundamental ethical principles and values involved in a case, followed by a careful review of pertinent Ethics Codes and laws. These authors also recommend that practitioners examine published statements from professional psychological associations that clarify practice domains that are not covered by an Ethics Code. In addition, relevant research literature should be reviewed to assist in the decision-making process. Finally, consultation

◉ **Table 3.3**
Forensic psychology ethical decision-making model (Bush et al., 2006)

1	Identify the problem
2	Consider the significance of the context and setting
3	Identify and utilize ethical and legal resources
4	Consider personal beliefs and values
5	Develop possible solutions to the problem
6	Consider the potential consequences of various solutions
7	Choose and implement a course of action
8	Assess the outcome and implement changes as needed

with colleagues or ethics committees may be a valuable resource for figuring out ethical problems. The fourth step of Bush et al.'s model involves examining personal values and beliefs. In forensic psychology, issues often arise that have moral implications and can influence psychologists' decision-making ability.

Although designed specifically for forensic psychologists, the ethical decision-making model proposed by Bush et al. (2006) has several features that can be beneficial in many ethical dilemmas. Paying attention to the context and setting involved can allow psychologists to consider cultural factors that may be affecting the ethical problem at hand. Identification of different parties in a case also seems to add nicely to the five-step approach, as this is quite similar to the third step of the narrative model described earlier (identify the relevant stakeholders). Making use of ethical and legal resources to aid decision making is clearly a good guideline for psychologists to follow. In particular, Bush et al.'s suggestion to review relevant research literature fits very well with the professional psychology concept of research informing clinical practice. The idea that ethics committees can be a resource for consultation also stands out in the forensic model. As noted above, Ethics Committees of state psychological associations are often not adjudicative and can be consulted with ethical dilemmas.

Canadian Code of Ethics Model. In the APA (2002b) Ethics Code, there is no specific procedure for addressing ethical problems – only ethical principles and standards are included. Other national psychological associations have developed their ethics codes with guidelines for ethical decision making. For instance, the Canadian Code of Ethics for Psychologists (Canadian Psychological Association, 2000) contains 10 steps for ethical decision making to approach ethical issues that are difficult to resolve and may require extensive consideration. The entire model is shown in ❯ Table 3.4.

Many parts of the Canadian model overlap with the five-step (Knapp & VandeCreek, 2006) and narrative approaches (Sturm, 2002), but some additional steps warrant mention. The last two phases of the process include assuming responsibility for the consequences of the decision and taking action to prevent the ethical problem from happening again in the future (CPA, 2000). These two steps go beyond the last part of the five-step model (look back or evaluate) by using the ethical dilemma and subsequent decision in a positive way to address potential conflicts in the future.

Compared to the APA (2002b) Ethics Code, the Canadian Code of Ethics model of ethical decision making (CPA, 2000) provides much more specific information for psychologists concerning ethical conflicts. Although at first this may seem a bit prescriptive, the model does present one avenue for psychologists who are faced with a situation that is not clearly addressed by current ethical standards. For example, as noted above, in areas like Internet and e-mail communication in clinical practice, the current APA Ethics Code offers little guidance for psychologists. In these instances, ethical decision-making models may be helpful for psychologists to use. Before the model within the CPA Ethics Code is widely adopted, however, it does need to be empirically investigated to verify its effectiveness (Hadjistavropoulos & Malloy, 2000).

Comparing the Four Models. Across the four models for ethical decision making presented in this chapter, several themes are salient. All four models appear to have an initial step that includes identifying the specific issues that exist in a case. Another similarity between models is the development of alternative courses of action to address an ethical dilemma. Following this, the process involves deciding which alternative to pursue and then acting or implementing a decision. Most models also contain a step to evaluate the action afterwards and examine the effect the decision has on all parties involved.

◼ **Table 3.4**

Steps for ethical decision making (Canadian Psychological Association, 2000)

1	Identify the individuals and groups potentially affected by the decision
2	Identify ethically relevant issues and practices, including the interests, rights, and any relevant characteristics of the individuals and groups involved and of the system or circumstances in which the ethical problem arose
3	Consider how personal biases, stresses, or self-interest might influence the development of, or choice between, courses of action
4	Develop alternative courses of action
5	Analyze likely short-term, ongoing, and long-term risks and benefits of each course of action on the individuals and groups involved or likely to be affected (e.g., client, client's family or employees, employing institution, students, research participants, colleagues, the discipline, society, self)
6	Choose a course of action after conscientious application of existing principles, values, and standards.
7	Act with a commitment to assume responsibility for the consequences of the action
8	Evaluate the results of the course of action
9	Assume responsibility for the consequences of the action, including correcting negative consequences, if any, or reengaging in the decision-making process if the ethical issue is not resolved
10	Appropriately act, as warranted and feasible, to prevent future occurrences of the dilemma (e.g., communicate and problem-solve with colleagues, change procedures and practices)

One weakness of the models we discussed is the lack of empirical research that has been conducted on their effectiveness for practicing psychologists. In a review of the literature on ethical decision-making models, Cottone and Claus (2000) pointed out that empirically based models must be developed to advance the study of ethical decision making in the future. Despite the lack of research in this area, ethical decision-making models provide a starting point for psychologists who are faced with difficult ethical problems that cannot be resolved by reference to the APA Ethics Code alone.

3.4   Summary

We started this chapter noting that ethical and legal issues pervade the daily work of psychologists. The NCSPP (2007) and the Assessment of Competency Benchmarks Work Group (2007) competency models also drive home the important fact that these issues are present from the very beginning of training in clinical psychology and that a developmental course in competence is expected. Each model offers a view of what that developmental course constitutes and gives us a picture of basic competency in this area. The models complement each other nicely in that one offers a view of ethics and legal issues as a general foundational competency underlying all of a psychologist's (or trainee's) activities, whereas the other model points to knowledge, skills, and abilities required in specific areas of practice.

The third levels of the NCSPP (2007) and the Assessment of Competency Benchmarks Work Group (2007) competency models (end of internship and beginning of professional practice, respectively) hint at what is required for expert competence in this area. We have offered a discussion of advanced skills in this area, based on these competency models. In particular, we believe that understanding and acknowledging the complexities of ethical and legal issues so as to be able to identify the primary issues of concern, having an ability to access resources, and applying ethical decision-making models in particular will help the practitioner navigate this area.

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4 Cultural Diversity

Martin J. La Roche · Michael S. Christopher

Abstract: In this chapter we present the theoretical and practical underpinnings of our culturally competent practice in psychology model. This contextually based model complements traditional clinical interventions by providing psychotherapists with a conceptual frame to guide culturally sensitive psychotherapy practice. To accomplish this goal we begin the chapter by providing an overview of the literature on cultural competence and describe several prominent cultural competency definitions, models, and guidelines. Second, we review individualistic, relational, and contextual interventions, and propose an integrative multidimensional approach in which we address strengths and weaknesses of these interventions vis-à-vis cultural competence guidelines. Third, we outline a three stage model with specific interventions that clinicians can use to enhance their cultural sensitivity in working with diverse clients. Derived from an integrative multidimensional approach, these three stages are: 1) addressing chief complaints and reducing symptoms, 2) understanding narratives, and 3) fostering empowerment. Fourth, we illustrate this approach with a clinical example and conclude with a discussion of the possibilities and challenges posed by these ideas as well as areas for future research.

4.1 Overview

Psychologists are becoming increasingly aware of the need for clinicians to be culturally competent in order to work effectively with diverse clients. This is exemplified by the emphasis on culturally sensitive intervention and treatment in the latest revision of the Ethical Principles of Psychologists and Code of Conduct (American Psychological Association [APA], 2002) and in the Guidelines on Multicultural Education, Training, Research, Practice, and Organizational Change for Psychologists (APA, 2003; hereinafter referred to as the APA Multicultural Guidelines). Inherent in these and similar guidelines is the message that "culture counts" (U.S. Department of Health and Human Services [DHHS], 1999, 2001). Despite this unified message, there is no general consensus within the field on exactly how to achieve this goal. Although several guidelines exist, there appears to be a recent shift in the way in which cultural competence has been conceptualized in psychotherapy to move beyond content (i.e., lists of issues that clinicians should consider when working with diverse clients) and focus more on process (i.e., fluid, practical ways in which this can actually be accomplished) (Lakes, López, & Garro, 2006; S. Sue, 1998).

Similarly, we view the common denominator of culturally competent practice in psychology (CCPP) as an emphasis on the integration of cultural contexts with specific strategies to guide the use of cultural elements effectively within interventions (Kazarian & Evans, 1998; La Roche, 2005; López, 1997). Therefore, CCPP complements other psychotherapies by adding a practical cultural-contextual perspective. Consistent with this goal, in this chapter, we will propose ideas to further organize and specify this contextual dimension within psychotherapy practice. To accomplish this, we start by reviewing several cultural competency

definitions, models, and guidelines, and offer our operationalization of CCPP. Second, we present a multidimensional approach that integrates key features of cultural competency models and guidelines for different clinical formulations, arguing that cultural considerations are an essential component of any intervention. Third, we describe specific interventions that clinicians can use to enhance their cultural competence by utilizing this multidimensional model. Fourth, we illustrate this approach with a clinical example and conclude with a discussion of the possibilities and challenges posed by these ideas. Overall, in this chapter, we aim to offer a practical process model for addressing a crucial though often neglected facet of mental health service delivery – cultural competence. Guarnaccia and Rodriguez (1996) noted the inadequate attention, both in practice and in the literature, devoted to conceptualizing culture within the development of culturally competent mental health services. Thus, before defining cultural competency and its implications, it is important to define culture and to discuss how it differs from – and is similar to – race and ethnicity.

4.2   Clarifying Race, Ethnicity, and Culture

Although race, ethnicity, and culture are very distinct from each other, they are often used interchangeably in the psychological literature, which can generate confusion and misunderstanding (Abreu & Gabarain, 2000; Betancourt & López, 1993). Race is often defined in terms of selected physical characteristics, criteria, or permanent human attributes (Betancourt & López, 1993). Historically, phenotypic attributes such as skin color and facial characteristics have been used to define racial groupings (e.g., Landrine & Klonoff, 1996). However, no psychological attributes or behavioral correlates can be inferred, given a participant's race (Helms, Jernigan, & Macher, 2005; Phinney, 1996). Some psychologists contend that race refers to biological characteristics of individuals as evidenced by their physical appearance (e.g., Rowe, 2002); however, race is a social artifact that has no biological evidence to support its existence (Bonham, Warshauer-Baker, & Collins, 2005). In fact, there is overwhelmingly greater genetic variation within a racial group than across racial groups (DHHS, 2001). Furthermore, using race as a psychological variable gives scientific legitimacy to a construct that has been used to perpetuate stereotypes that impose an oppressive sociopolitical hierarchy upon racial minorities within American society.

Ethnicity is a broader term than race, as it relates to the shared nationality, language, common values, beliefs, and customs of an identifiable group of people (Betancourt & López, 1993). It entails a person's identification with an ethnic group, which may be determined by genealogical ties or other socially related factors (Alvidrez, Azocar, & Miranda, 1996). In contrast to the identification of race, a person has some ability to define his/her own ethnicity; however, similar to the construct of race, ethnicity connotes a homogeneous and stereotypical understanding of an individual's cultural experience that cannot capture the complexity, vitality, and diverse nature of any experience. In addition, race and ethnicity are conceptualized as fixed and invariant attributes, thus overlooking the possibility that understandings and identifications may change.

Given any individual's complex set of changing experiences, we articulate a conceptualization of culture that is more suitable for individuals to define their own unique experience. Culture has been understood in many ways; however, we believe that Geertz's (1973)

definition of culture is particularly applicable, given its operational implications. Geertz defined culture as "an historically transmitted pattern of meanings embodied in symbols; a system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate, and develop their knowledge about and attitudes toward life" (p. 89). Consequently, culture is understood as an interrelated web of meanings that are dynamic, complex, and representative of a multifaceted experience, in which a person is understood first and foremost as a *homo symbolicus*, or meaning-maker. Meaning-making is a semiotic act in which persons not only relate to, but also create, a world and self of their own. Although these meanings reside in an individual's mind, they are inseparable from the sociocultural context in which they are created (Bruner, 1990; Shweder, 1995). Clearly, meanings vary greatly between and within cultural groups; however, members of any cultural group often construe themselves and the world in somewhat similar ways. Several conceptualizations of these common cultural characteristics have been offered. One of the most commonly used is D'Andrade's (1990) term *cultural models*, which consists of the representational and organizational patterns that make up the meaning system of any cultural group.

Geertz's (1973) definition of culture is applicable not only to racial, ethnic, and other minority groups (e.g., persons with a disability), but to all individuals. Consistent with Geertz's conceptualization of culture is the notion that meanings are fluid and flexible, especially when individual change occurs, such as migration or contact with different cultural groups (Berry & Kim, 1988; Carter & Qureshi, 1995). In addition, this socio-constructive definition of culture embeds individuals' experiences within their cultural contexts, making individuals' meanings inseparable from their cultures (Shweder, 1995) and highlighting the need to assess one's context. Furthermore, this definition assumes that individuals also have some influence in transforming their cultural context, not just passively experiencing the contextual influence on them (López & Guarnaccia, 2000), which is in stark contrast to traditional conceptualizations of culture.

A socio-constructive conceptualization of culture is also congruous with the APA Multicultural Guidelines' (2003) emphasis on "culture-centered" practices. Throughout the Multicultural Guidelines, psychologists are encouraged to use a "cultural lens" as a central focus of professional behavior. In culture-centered practices, psychologists recognize that all individuals, including themselves, are influenced by different environments, including their historical, ecological, sociopolitical, and disciplinary contexts. For example, a culture-centered approach acknowledges that behavior may be shaped by culture, groups to which one belongs, and cultural stereotypes including those regarding stigmatized group members (APA, 2003).

In CCPP, clinicians utilize culture-centered practices to assess and incorporate clients' cultural meanings or models throughout evaluation and treatment. From this anthropologically informed conception of culture, the integration of perspectives is not based on a presumed cultural difference or factor associated with the client from a specific ethnic or racial group (Lakes et al., 2006). Instead, it focuses on the process of defining the problem from both the therapist's and client's perspectives; the identification or construction of a presenting problem is a process that must be informed by both parties. In sum, contextualized and process-oriented conceptualizations of culture that do not depend on specific group membership offer a base for advancing an understanding of cultural competency in clinical contexts (Garro, 2003, 2005).

4.3   Definitions and Models of, and Guidelines for, Cultural Competence

There are a number of definitions of cultural competence. Davis and Donald (1997) defined cultural competence as the integration and transformation of knowledge about individuals and groups of people into specific standards, policies, practices, and attitudes used in appropriate cultural settings to increase the quality of services, thereby producing better outcomes. S. Sue (1998) defined cultural competence as "the belief that people should not only appreciate and recognize other cultural groups, but also be able to effectively work with them" (p. 441). López (1997) argued that the "essence of cultural competence … is moving between two cultural perspectives, that of the therapist and that of the client." Building on these conceptualizations, Whaley and Davis (2007) stated that cultural competence includes (a) the ability to comprehend the dynamic interplay between the heritage and adaptation dimensions of culture in shaping human behavior; (b) the ability to use the knowledge acquired about an individual's heritage and to use this knowledge to adapt existing treatments to maximize the effectiveness of assessment, diagnosis, and treatment for any given client; and (c) the ability to recognize how one's own cultural background, clinical orientation, and overall approach to therapy impact one's delivery of services across diverse groups.

In addition to specific definitions of cultural competence, several basic competency models have been developed to help instruct psychologists regarding how they can implement cultural competence into everyday practice. D. W. Sue et al. (1982) outlined one of the earliest and most influential models for specific competencies to be achieved in cross-cultural psychotherapy. Their three core competencies of beliefs/attitudes, knowledge, and skills have formed the foundation for many subsequent models (e.g., Arredondo, Toporek, Brown, Sanchez, & Stadler, 1996; Fowers & Davidov, 2006; Pope-Davis & Dings, 1995; D. W. Sue, Arredondo, & McDavis, 1992). In the D. W. Sue et al. (1982) model, beliefs and attitudes refer to the mindset psychologists have about ethnic and racial minorities as well as their responsibility to question their biases and stereotypes, develop a positive orientation toward multicultural perspectives, and recognize ways in which personal values and biases can affect cross-cultural psychotherapy relationships. Knowledge is the understanding that psychologists have of their own worldview, their specific knowledge of cultural groups, and their understanding of sociopolitical influences on cross-cultural relationships. Skills refer to the specific abilities that are necessary to work with racial and ethnic minorities (D. W. Sue et al., 1982; D. W. Sue et al., 1992).

D. W. Sue (2001) expanded the model to incorporate a multidimensional view of cultural competence that integrated three primary dimensions: (1) racial and culture-specific attributes of competence, (2) components of cultural competence, and (3) foci of cultural competence. The expanded model is based on a 3 (awareness, knowledge, skills) X 4 (individual, professional, organizational, societal) X 5 (African-American, Asian-American, Latino/Hispanic American, Native American, European American) factorial combination, which allows for the systematic identification of cultural competence in a number of different areas. Similarly, Constantine and Ladany (2001) expanded the three competencies to six in an attempt to broaden the conceptualization of cultural competence to include: (a) self-awareness, (b) general multicultural knowledge, (c) multicultural psychotherapy self-efficacy, (d) ability to understand unique client variables, (e) effective psychotherapy alliance, and (f) multicultural psychotherapy skills.

There are also a number of guidelines in place to increase the cultural competence of practicing psychologists, and to help ensure that students receive adequate training in cultural competence. Two of the most prominent sets of guidelines are the APA Multicultural Guidelines (2003) and the National Council of Schools and Programs of Professional Psychology (NCSPP) Competency Developmental Achievement Levels (2007). Both sets of guidelines are broad in scope while also offering specific suggestions for moving toward cultural competence. More specifically, the APA Multicultural Guidelines were developed to provide psychologists with (a) the rationale and needs for addressing multiculturalism and diversity in education, training, research, practice, and organizational change; (b) the basic information, relevant terminology, current empirical research from psychology and related disciplines, and other data that support the proposed guidelines and underscore their importance; (c) the references to enhance ongoing education, training, research, practice, and organizational change methodologies; and (d) the paradigms that broaden the purview of psychology as a profession. The APA Multicultural Guidelines address American ethnic and racial minority groups as well as individuals, children, and families from biracial, multiethnic, and multiracial backgrounds. Thus, the term "multicultural" in these guidelines refers to "interactions between individuals from minority ethnic and racial groups in the United States and the dominant European–American culture" (APA, 2003, p. 378).

There are six specific APA Multicultural Guidelines (2003) that are subsumed under five headings:

- Commitment to cultural awareness and knowledge of self and others
  Guideline 1: Psychologists are encouraged to recognize that, as cultural beings, they may hold attitudes and beliefs that can detrimentally influence their perceptions of, and interactions with, individuals who are ethnically and racially different from themselves.
  Guideline 2: Psychologists are encouraged to recognize the importance of multicultural sensitivity/responsiveness to, knowledge of, and understanding about, ethnically and racially different individuals.

- Education
  Guideline 3: As educators, psychologists are encouraged to employ the constructs of multiculturalism and diversity in psychological education.

- Research
  Guideline 4: Culturally sensitive psychological researchers are encouraged to recognize the importance of conducting culture-centered and ethical psychological research among persons from ethnic, linguistic, and racial minority backgrounds.

- Practice
  Guideline 5: Psychologists are encouraged to apply culturally appropriate skills in clinical and other applied psychological practices.

- Organizational change and policy development
  Guideline 6: Psychologists are encouraged to use organizational change processes to support culturally informed organizational (policy) development and practices.

Although only one of the guidelines (guideline 5) explicitly addresses the practice domain, we believe all six of the guidelines are instrumental for CCPP. As noted above, cultural awareness and knowledge of self and others (guidelines 1 and 2) are inherent in CCPP. Additionally,

teaching, mentoring, and supervision (guideline 3); evaluating the effectiveness of one's interventions (guideline 4); and taking an active role in shaping one's work environment (guideline 6) are all core activities of the practice of psychology, as well as CCPP.

Unlike the APA Multicultural Guidelines (2003) which focus primarily on practicing psychologists, the NCSPP Guidelines (2007) were established to provide a competency model of education and training of students for professional schools of psychology. Although cultural diversity is only one of the seven specific competencies outlined in the guidelines, it has been a primary agenda issue for NCSPP since its inception in 1976 (NCSPP, 2002). The NCSPP diversity competency requires the ability of students to identify and understand issues of individual and cultural difference (ICD), and issues of power, privilege and oppression. This understanding provides the foundation for all professional functions and activities, including assessment, conceptualization, intervention, consultation and evaluation approaches (NCSPP, 2007). The NCSPP cultural competency guidelines require an affirmation of the richness of human differences, ideas, and beliefs across various dimensions of diversity. Attention to social and cultural values influencing the profession as well as the development of awareness of ICDs and values within the practitioner are themes to be interwoven across all stages of training (Peterson, Coleman, Dobbins, & Boyce, 2002).

In terms of content, the NCSPP (2007) diversity competency is composed of five main domains of knowledge, skills and attitudes (KSA) related to individual and cultural difference: (a) multiple identities; (b) issues of power, oppression and privilege; (c) ICD-specific knowledge base; (d) culturally competent service provision; and (e) ethics. Each domain is operationalized by specific tasks and outcomes across the dimensions of KSAs (NCSPP, 2007). The first domain emphasizes an understanding of how students identify and understand themselves and others as having multiple identities, and how they use that knowledge in their professional activities. The second domain emphasizes an understanding of the constructs of power, oppression and privilege, the impact of these, and the psychologists' role in promoting social justice. The third domain emphasizes the ability to understand and critique the scientific, theoretical and applied ICD knowledge base, including an understanding of evidence-based scholarship and the appropriate application of research to diverse populations. The fourth domain emphasizes the students' ability to provide culturally competent services in all of their professional roles. The fifth domain includes students' ability to integrate an awareness of ICD into ethical decision making.

Overall, these definitions, models, and guidelines of cultural competence share several overlapping features. First, clinicians must be able to access any given clients' cultural perspective and then integrate it within her or his cultural perspective. Second, clinicians must be able to effectively relate to, or understand, clients from various backgrounds. Third, the cultural context must be integrated into treatment; this will also have an impact on the therapist, the client, and the relationship between them. A potential shortcoming of many of these models, however, is that the construct of cultural competence only emphasizes race or ethnicity, where recommendations are given for achieving competency in working with members of a particular group. As Lakes et al. (2006) suggest, the emphasis on racial and ethnic minority groups is understandable because the justification for cultural competence is based largely on the existence of disparities in the provision of relevant and effective mental health services to members of these groups. However, as noted above, a one-size-fits-all within-group approach is an essentializing view that may inadvertently promote group stereotypes instead of cultural sensitivity while failing to address individual needs (López, Kopelowicz, & Canive, 2002).

Therefore, we understand CCPP as a process in which the therapist develops an awareness of her or his own culture and clinical expertise, and subsequently enhances this information by allowing each client to express what is important for him/her about his/her culture, as well as his/her treatment preferences. This process fosters the development of a therapeutic relationship that is embedded within the client's and therapist's contexts as a means to offer the most effective treatment. As noted above, we espouse a broad, socio-constructive conceptualization of culture that can include (but is not limited to) race, ethnicity, disability, age, gender, sexual orientation, socioeconomic status, and geographical location, as well as the interactions between each. Similarly, it is important to note that in this operationalization, the client can be conceived of in broad terms that can mean individual, couple, family, group, or organization, or other numerous possibilities.

Before we proceed further, it is important to note that this particular understanding of CCPP emerged from several contexts, specifically from clinical work conducted with urban, low-socioeconomic, and culturally diverse communities in Boston and the evolving theories of culturally competent psychotherapy (e.g., López et al., 2002; D. W. Sue & Torino, 2005). The urban communities in which we have both worked – similar to many socioeconomically deprived neighborhoods – are plagued by crime, inadequate housing, poverty, deficient schools, and difficulties accessing medical services amongst a host of other problems. In working with clients in these communities, it became clear to us that it is insufficient to promote individual change (e.g., reduce depression or anxiety symptoms); social and contextualized change is also necessary if psychotherapy is to be effective in addressing the needs of marginalized clients. Therefore, based on our own clinical experience, in conceptualizing CCPP we also agree with others who have asserted that a shared goal of culturally competent psychotherapy is to bring about social change through clinical practice (NCSPP, 2007; Whaley & Davis, 2007).

4.4   A Multidimensional Conceptualization

A CCPP perspective assumes that human beings are complex, and therefore it includes a multiplicity of diverse and interactive characteristics that are better understood using a multidimensional approach. Each dimension can be understood as a level of analysis or perspective in which certain aspects of the psychotherapeutic process are either excluded or highlighted. The three perspectives or dimensions that will be highlighted in this chapter are: (1) individualistic, (2) relational, and (3) contextual. The individualistic level addresses the client's primary presenting issues; the relational perspective highlights the psychotherapeutic relationship; and the contextual level emphasizes the influence of the context on clinical understandings. Several additional dimensions could be constructed and effectively used within the psychotherapeutic process (e.g., spiritual, psychopharmacological); however, for the sake of parsimony, only three dimensions are herein underscored (La Roche, 2005). This multidimensional framework is also consistent with the evolving field of psychotherapy integration (Anchin, 2008; Norcross & Goldfried, 2005) where behavior is viewed as a result of a multiplicity of factors, and effective psychotherapy is predicated on the coherent integration of a number of aspects of a client's life (Gold & Watchel, 1993).

An exponential number of psychotherapeutic models have been developed since 1895 when Breuer and Freud published their *Studies on Hysteria*. Although current estimates on the

number of different contemporary models of psychotherapy begin at several hundreds, most put the number in the thousands (Stricker & Gold, 1993). CCPP attempts to make sense of this growing plurality of psychotherapeutic approaches by employing a multidimensional frame that allows clinicians to use, connect and integrate disparate formulations and consequently develop interventions in a coherent manner. It is argued that each dimension highlights certain issues, while others fade to the background. The dimension(s) being used have important clinical and cultural implications for the way psychotherapy is conducted. If clinicians become aware of the advantages and disadvantages of emphasizing each dimension, they will be more able to compensate for these shortcomings. Thus, some of the advantages and disadvantages of these dimensions are underscored as they are described. Clinicians are encouraged to think in multidimensional ways by questioning, testing, and enriching these formulations during the psychotherapeutic process and then exploring with their clients the applicability of each conceptualization. Ultimately, clients will decide which understandings and components of their cultural experience are more useful for them. This multidimensional framework is consistent with a recent APA Presidential Task Force (APA, 2006) elaboration on evidence-based practice in psychology, which is defined as, "the integration of the best available research with clinical expertise in the context of client characteristics, culture, and preferences" (p. 273).

CCPP is conceived of as a dynamic process in which client needs and the psychotherapeutic relationship are embedded within multiple, specific cultural contexts. As opposed to being restricted to the client's immediate context (as is often the case in individualistic treatments, for example, behavioral therapy), the cultural context is herein defined as the geographical space, historical time, and socioeconomic and political conditions in which the psychotherapeutic relationship occurs. Cultural contexts are not monolithic and homogeneous phenomena, but rather, dynamic and complex sets of interacting factors, which influence the psychotherapeutic process and can be altered by the psychotherapeutic relationship. Moreover, it is argued that the influence of the cultural context is consistently present, although often inadvertently, within the psychotherapeutic process. Some have suggested that the selective use of specific perspectives (e.g., individualistic, relational) is a result of sociopolitical, historical, and economic conditions (Cushman, 1995). However, we hope that the use of a multidimensional approach will offer a convergence of different perspectives, and a widening scope of understandings that will allow alternative explanations of the phenomenon to coexist by embedding them within the appropriate cultural context. One of the main implications of this approach is that as clients and therapists become increasingly aware of the influence of cultural and contextual factors, they will have more influence in constructing their lives. The central assumptions of the three underscored dimensions – that is, individualistic, relational, and contextual – will be highlighted, followed by a three-staged CCPP model.

The individualistic dimension is herein used to encompass all of the psychotherapeutic models and interventions that treat clients as independent, separate, and autonomous individuals with well-defined boundaries between observers, social contexts, and themselves. A common denominator among individualistic psychotherapies is that clients are the exclusive focus of treatment, while the client's and therapist's cultural contexts fade to the background. For example, classic psychoanalytic models emphasize the need to make clients aware of their unconscious, inner dynamics, while the therapist acts as a neutral blank screen onto which clients transfer their subjective experiences (Freud, 1933). Cognitive-behavioral therapists (e.g., Beck, 1967) identify specific maladaptive thoughts, behaviors, and schemas, and humanistic

clinicians use the client or self as the unit of analysis (Maslow, 1969; Rogers, 1961). Similarly, psychopharmacological interventions assume underlying biochemical processes (e.g., deficit in neurotransmitter activity) to explain symptoms (e.g., depression), while biologists search for genetic predispositions to clients' psychological problems. Although different individual attributes are highlighted by various theories (e.g., unconscious processes, biological predispositions) much of contemporary mental health treatment is characterized by an emphasis on the individual (Fowers & Davidov, 2006; Tseng & Streltzer, 2001).

Individualistic psychotherapies are often informed by the scientific method, which is generally considered the most reliable and valid way to glean objective data about a client (Kazdin, 2008; Task Force on Promotion and Dissemination of Psychological Procedures, 1995). Not surprisingly, empirically supported assessments and psychotherapies have flourished under the premise that randomized controlled trials are the best method to determine what treatments "work" (La Roche & Christopher, 2008; Sternberg, 2006). However, these treatments are often based on the assumption that science and the pursuit of knowledge are value-free, which inadvertently has not only obscured the possibility for therapists to explore their cultural assumptions (as suggested by all cultural competent models), but also clouded the political nature of its discourse (La Roche, 2005). Decontextualized and apolitical psychotherapy can de-emphasize sociopolitical factors (e.g., poverty, history of slavery) and may have unknowingly strengthened the status quo by supporting its underlying, dominant cultural assumptions (La Roche & Christopher, 2008). Similarly, psychologists who are seeking to be neutral and objective in treating their clients may be unaware of how their cultural biases can influence their services and confirm their own political agendas.

Most individualistic psychotherapies regard the psychotherapeutic process as occurring within an historical and geographical vacuum, overlooking many aspects of the macrocultural context (e.g., community violence or experiences of discrimination). For example, there is a paucity of psychotherapy research that addresses how the role of history and sociopolitical factors in mental health can compromise its effectiveness with marginalized groups for whom these issues can be more prominent (Comas-Diaz, 2006). Furthermore, as articulated in the APA Multicultural Guidelines (APA, 2003), despite goals of neutrality and objectivity, individualistic or mainstream psychotherapies may inadvertently pathologize certain cultural characteristics (e.g., collectivism = dependence/immaturity) and promote others (e.g., individualism = autonomy/maturity).

Given the limited scope of most individualistic models of psychotherapy, many therapists utilizing these treatments may neglect to consider cultural competence guidelines. For example, most individualistic psychotherapies do not encourage therapists to assess their own beliefs and knowledge of cultural issues; they are instead encouraged to remain neutral. The exploration of personal cultural assets/biases is a key component of most cultural competency models and guidelines (e.g., D. W. Sue et al., 1992). Furthermore, a neutral stance could be considered as a culture-specific expression of our mainstream society that may not match the expectations of many culturally diverse clients. Similarly, therapists who subscribe to an individualistic model are not asked to evaluate their own experience as a cultural being, and how this experience has impacted their life and how they view others (e.g., White privilege; McIntosh, 1988).

Additionally, traditional individualistic models of psychotherapy were derived in specific social contexts that may not have validated the humanity of members from marginalized groups, which can stifle psychologists' ability to adapt or create novel approaches to psychology that may better suit clients' concerns (Constantine & D. W. Sue, 2005).

In individualistic psychotherapies, treatment goals generally emphasize change within the individual rather than transforming the cultural context or their relationships within that context (La Roche, 2005). Cultural processes are addressed as individual variables, and socioeconomic and political problems are "interiorized" (located within the self). Consequently, clients may be implicitly blamed for these sociocultural problems. Moreover, individualistic psychotherapeutic models are at risk of assuming that clients' inability to adapt to the dominant culture excludes them from the benefits of the dominant culture; thus, clients are encouraged to cope or adapt to the majority culture, rather than to question or change it, and cultural minorities are encouraged to assimilate to the American culture. If change is defined solely in individualistic terms, then psychotherapy can only be viewed as an instrument to encourage clients to adjust to a society that often is not reflective of their values (Hall, 1997). To enhance cultural competence, psychologists must develop a basic understanding of sociopolitical influences on cross-cultural relationships; however, this is often neglected in individualistic psychotherapies (D. W. Sue & Torino, 2005).

The relational dimension focuses on the psychotherapeutic relationship as a whole, rather than on the client or on the therapist as isolated entities. Interactions amongst people prevail as the object of study, while splits between therapists and clients are considered artificial. Relational psychotherapies espouse the belief that the human mind is interactive rather than monadic, and that psychotherapeutic process should be understood as occurring between people rather than within individuals (e.g., Jordan, Walker, & Hartling, 2004). The relational dimension is composed of a number of psychotherapies, including (but not limited to) object-relations (Klein, 1955), interpersonal (Klerman, Weissman, Rounsaville, & Chevron, 1984; Sullivan, 1953), modern intersubjective psychoanalysis (Mitchell, 1988), narrative (Epston & White, 1992), and feminist (Brown, 1994) psychotherapies; all of these approaches underscore the interpersonal nature of psychotherapy.

While individualistic therapists are encouraged to minimize or control their own biases and prejudices (e.g., Beck, 1991; Freud, 1933), relational clinicians are conceived as part of the research field in as much as they are part of the phenomena being studied. Within the psychotherapeutic process clinicians' subjectivity is also included, and is used as an important tool to empathize and connect with clients. Therapists' experiences and countertransference enrich and inform their understanding of their clients' experiences (Gelso & Mohr, 2001; La Roche, 1999; Mitchell, 1988). Similarly, relational approaches espouse a view in which the therapists' objective and privileged standpoint is questioned, encouraging a more egalitarian relationship between client and therapist (Jordan & Surrey, 1983). Therapists are often concerned about developing relationships in which mutual and reciprocal influence is accepted and promoted, and empathy is a crucial tool for connection (Jordan & Surrey, 1983; Kohut, 1984). Narrative therapists (Angus & McLeod, 2004; Epston & White, 1992), for example, have described the psychotherapeutic process as a joint venture between therapists and clients, to edit, reframe, and co-construct narratives.

Relationships are crucial for psychotherapeutic change (e.g., Wampold, 2007); it is often assumed that if clients are able to change their interpersonal dynamics, they will achieve psychotherapeutic change. Although initial cultural competence models appeared to emphasize specific skills to enhance treatment of individuals from specific groups, more recent models also emphasize the importance of broader relational factors in therapy; particularly an effective psychotherapy alliance (Constantine & Ladany, 2001; Saldaña, 2001).

By addressing relational issues in therapy, these psychotherapy approaches lend themselves to being more culturally sensitive, because they invite discussion about differences and similarities between the therapist and client (La Roche & Maxie, 2003). This dialogue can create an atmosphere in which issues that are more relevant to patients (e.g., cultural or gender differences) are addressed rather than following a therapy manual. This allows the therapist to explore his or her own beliefs about cultural factors with the client, which is a seminal premise in the APA Multicultural Guidelines (2003, Guidelines 1 and 2). However, although relational psychotherapies underscore interpersonal issues, particularly within the psychotherapeutic relationship, they often neglect events that occur outside of the psychotherapeutic session. Many classic relational models, with a growing number of significant exceptions (e.g., Ballou, Matsumoto, & Wagner, 1992; Brown, 1994), seem to reduce culture to the intersubjectivity of the client and therapist (Miller & Stiver, 1997) or common patterns of interaction of specific cultural groups. Consequently, external socioeconomic and political pressures may be de-emphasized, and thus, important experiences such as a poverty and discrimination may be overlooked.

The socio-constructive dimension of cultural competence underscores the sociopolitical context in which the therapeutic relationship is embedded. It focuses on the idea that culture and society are essential in constructing one's experience of reality. Individuals and relationships are unknowable without an understanding that locates them within a cultural and historical context (APA, 2003; Cushman, 1995; Gergen, 1991). Some socio-constructive approaches include, but are not limited to, hermeneutics, post-modernism, community psychology, deconstructive approaches, cultural psychology, and some cross-cultural psychology models. Although some cross-cultural approaches emphasize individualistic or relational variables, most cross-cultural approaches are characterized by an understanding of culture as deeply embedded in the consciousness of all human beings, and central to all psychological functioning.

Socio-constructive theories hold that truth is not the result of rationally subjecting hypotheses to empirical tests, but rather the result of what emerges from a network of social agreements (Gergen, 1991). Thus, socioconstructivists assert it is not the "objective" world that determines scientific claims, but rather the social processes within science and society. For example, Cushman (1995) described psychotherapeutic models as expressions of complex sociopolitical, historical and economic interests. Within specific groups or historical eras, some constructions of "truth" or psychotherapeutic models are favored over others. As sociopolitical and economic conditions change, healing practices also shift (Cushman, 1995). Similarly, some cross-cultural psychologists (e.g., Moghaddam & Studer, 1999) have argued that cross-cultural psychology should pursue a social or normative understanding of clients, in which knowledge is treated as a set of agreements within cultural groups.

Claims about truth are intricately interconnected with the distribution of power within specific societies. Those groups to whom knowledge is attributed are generally granted the privilege of making decisions about what truth is and these determinations usually favor their own interests. The focus on power differentials in socio-constructive models is similar to NCSPP's (2007) diversity competency emphasis on issues of oppression and marginalization. Ultimately, socio-constructivists explain the decision to regard any set of behaviors or experiences as a psychological disorder rather than a medical disorder, a criminal act, or a response to an oppressive environment is not a scientific decision, but rather a political one. Such decisions are grounded in cultural and economic perspectives that arbitrate which behaviors are acceptable for a specific society (D. W. Sue & D. Sue, 2007). Similarly, in traditional psychotherapy,

many goals (e.g., individuation, insight) reflect Western values (e.g., materialism, individualism, heterosexualism), while alternative objectives (e.g., spiritualism, collectivism, homosexualism) may be devalued. Accordingly, in socio-constructivist therapies, clinicians and clients are encouraged to explore how their own questions, interactions, feelings, and even therapeutic goals may reflect larger sociopolitical, cultural and economic issues (Cushman, 1995; Helms & Cook, 1999; Helms et al., 2005). This is akin to the knowledge component of a number of KSA models of cultural competence, where knowledge includes the understanding that psychologists have of their own worldview and their understanding of sociopolitical influences on cross-cultural relationships (e.g., D. W. Sue, 2001).

As noted above, many individualistic psychotherapies conceptualize change as a process that occurs solely within the individual. Consequently, most treatment outcome measures are a reflection of individual change (e.g., self-esteem, insight, ego strength, increased self-control, decreased anxiety or depression, self-actualization), and most psychotherapeutic interventions aim to change or improve individuals, not their contexts (La Roche, 2005). Because psychotherapeutic interventions are located within a cultural context, change can also be reconceptualized to include cultural context transformations. Psychotherapeutic goals must be broadened to include not only individual, but also community-based prevention and change. To accomplish this expansion it is necessary for psychotherapy models to incorporate community-based treatment elements (see Marsella, 1998; Muñoz & Mendelson, 2005) and develop outcome measures that assess contextual changes (e.g., community empowerment). If psychotherapy is conceptualized as an agent to transform the cultural context, it will likely become more reflective of the needs of culturally diverse individuals who are often oppressed by the larger cultural context.

Consequently, socio-constructive psychologists and cultural competence models encourage therapists to seek knowledge that is sensitive to the client's political and socioeconomic needs, and helps encourage them to transform their cultural context. The primary difference between various cultural competence models seems to be the way in which the cultural context is defined. Earlier models described it more broadly and abstractly, while more recent approaches attempt to do so in experiential terms. The challenge is to find broad, encompassing terms (e.g., history, socioeconomic status (SES), etc.) that are also concrete enough to the therapeutic relationship. In addition to the client's immediate context, other historical contextual issues must be taken into account (e.g., systematic oppression, history of violence, and intergenerational trauma) in treatment (La Roche & Christopher, 2008).

Unfortunately, socio-constructivist efforts to contextualize the individual and group with respect to their cultural history may have minimized individual responsibility and relational issues (Miller & Stiver, 1997; Prilleltensky, 1999). For example, they may have at times focused solely on detrimental contextual conditions and overlooked clients' resilience. Furthermore, assuming general contextual characteristics about culturally diverse groups often minimizes individual differences and promotes cultural stereotypes. As several authors note (e.g., Fowers & Richardson, 1996; Prilleltensky, 1999; Ridley, 2001), some cultural psychotherapeutic models promote a separate set of psychotherapeutic principles and guidelines for culturally diverse clients other than Non-Hispanic Whites, and similarities between cultural groups are devalued. This further polarizes majority and minority groups into separate and opposing camps. Finally, it is important to state that although socio-constructive approaches have often emphasized the cultural context, these definitions are difficult to translate into concrete psychotherapeutic interventions.

4.5　Infusing CCPP into Individual, Relational, and Contextual Interventions

In an environment of changing complexity and a multiplicity of facets within the psychotherapeutic process, clinicians' interventions can become more effective when they are conceptualized using a multidimensional model. Emphasis on a dimension creates a perspective with specific advantages and limitations. Clinicians are thus encouraged to formulate client's issues using a multiplicity of conceptualizations. Clinicians can benefit themselves and their clients if they consistently explore and question their own assumptions (and the influence of those assumptions) upon their clinical work by, for example, wondering which variables, factors, or dimensions are regularly emphasized during the sessions and which are being overlooked or rarely discussed. Are the variables being underscored individualistic, relational, or contextual? Furthermore, are the psychotherapists' formulations emphasizing or overlooking any of these areas? If so, why? Are the psychotherapists' formulations consistent with the variables that clients are emphasizing? It is asserted that clinicians' enhanced awareness of these assumptions may increase their understandings of how highlighting each dimension may influence their clients' treatment and thus help them integrate different therapeutic strategies, all the while operating within a culturally competent framework.

Although clinicians can conceptualize multiple formulations simultaneously, only a limited number of interventions can coherently be conducted at a specific time and place. The following three stages are proposed: (1) addressing chief complaints and symptom reduction, (2) understanding clients' narratives, and (3) fostering empowerment. Each psychotherapeutic stage is a concrete, tangible translation of the dimension being highlighted. Addressing chief complaints, for example, is a demonstration of underscoring individualistic understandings; the socio-constructive dimension is operationalized through the empowerment stage. Each stage has a set of conditions that need to be met if clients are to move to the subsequent stage; however, once these conditions are met the psychotherapeutic process does not unfold on a stepwise, linear fashion. Psychotherapy may become cyclical and overlapping (in which clients and therapists focus simultaneously on several dimensions). The proposed model should not be viewed as a manualized psychotherapeutic cookbook, but instead, as a set of general guidelines that foster the practice of culturally competent psychotherapy. Although these stages are compatible with most types of psychotherapy, we encourage clinicians to consider the cultural ramifications of the particular conceptualization they are using (e.g., individual, relational, socio-constructivist) and how this interacts with the goals of CCPP.

Stage 1: Addressing Chief Complaints and Reducing Symptoms
The main goal of this first stage is to address clients' immediate concerns which often consist of problem solving and/or symptom reduction. To address clients' chief complaints, it is first necessary to understand these in an in-depth and culturally contextualized manner (Angus & McLeod, 2004; Kleinman, 1988; La Roche, 2002; S. Sue, 1998). This is crucial because worldview and life experiences may affect how clients present symptoms to therapists, the personal meaning of illness, their motivation and willingness to seek treatment and social support networks, and their perseverance in treatment (APA, 2003). An in-depth understanding of the client's chief complaints entails an exploration of the meanings of his or her essential narratives (La Roche, 1999; Lakes et al., 2006). At the end of the first session, it is useful to conclude with a mutually agreed upon set of psychotherapeutic goals between clients and therapists that will

allow them to understand what to expect from the psychotherapeutic process (S. Sue, 1998). As means to further orient the client to therapy, it is also useful to structure treatment and clearly articulate frequency and length of sessions and complete all necessary forms, (e.g., informing clients about the limits of confidentiality, arrangements with managed care companies, no-show policy).

As clients narrate their chief complaints, the consequences of these problems on their functioning should be explored, through a thorough, culturally-sensitive assessment. Consistent with Standard 9.02 of the APA Ethics Code (APA, 2002) and the APA Multicultural Guidelines (2003), multiculturally sensitive practitioners are encouraged to be aware of the limitations of assessment practices, including intakes, standardized assessment instruments, and diagnostic methods. Norasakkunkit and Kalick (2002), for example, found that commonly used measures of emotional distress (Beck Depression Inventory, Social Avoidance and Distress Scale, and Fear of Negative Evaluation Scale) incorrectly pathologized Asian-Americans for being highly interdependent and/or minimally independent. Similarly, members from different cultural groups may have preferred styles for reporting their concerns in the beginning stages of treatment. It has been found that some Asian clients prefer to first discuss somatic complaints (stomach pains, headaches – Kleinman, 2001; Ryder et al., 2008) rather than intrapsychic issues, while some Latinos clients seem to benefit more from discussions about their families or friends (La Roche, 2002). However, an increasing number of managed care organizations require the use of standardized, brief diagnostic and symptom tracking measures beginning in the first therapy session, despite questionable cross-cultural applicability of these scales. Relatedly, it is insufficient to obtain information solely about clients' functioning; it is helpful to inquire about their family and social environments through an ethnographic history, family geneogram, looking at family photographs, and asking about relevant "family stories" or cultural stories as well as exploring community resources and social networks (Kleinman, 1988). The APA Multicultural Guidelines (2003) encourage psychologists to avoid using instruments that have not been adapted for the target population, and they are also encouraged to use both pilot tests and interviews to determine the cultural validity of their instruments (Samuda, Feuerstein, Kaufman, Lewis, & Sternberg, 1998; S. Sue, 1999).

If clients report safety concerns (e.g. suicidality, homicidality, substance abuse, domestic violence) therapists need to become more directive and structured. Priority is given to ensuring safety and the need to establish effective precautions (e.g., detailing and rehearsing emergency plans, hospitalizations) cannot be emphasized enough. Depending upon the specific cultural beliefs that matter for most diverse clients (e.g., familism, spiritualism, allocentrism), it is often useful to identify clients' resources (e.g., extended family, church) as means to design a safety plan that is culturally sensitive (Christopher & Skillman, 2009). Clients' basic needs (e.g., food, shelter, health) also need to be addressed during the first stages of psychotherapy. These issues may be overlooked by culturally incompetent therapists, who assume that this is not within their purview. In many contexts, therapists can be extremely helpful in providing clients with some information on how to start meeting their basic needs (e.g., seeking social security benefits, on what to expect from their new culture, etc.). If these basic needs are not addressed, it may be difficult for psychotherapy to proceed to the next stages (La Roche, 2002; Maslow, 1943). It is important to note that the ways in which clients deal with these basic problems are also illustrative of the ways in which they construct their narratives and lives. Narratives are herein understood as the meanings or stories people make of their reconstructed past, present

and imagined future. These meanings can direct and organize peoples' affect, cognition, and behavior.

After clients describe their chief complaints, it is useful to explore their explanations of these problems in a culturally appropriate manner, inquiring about when the problem started, how it evolved, and wondering about why the client sought help at this particular point in time (Kleinman, 1988). Therapists should remember not only these explanations but also the words (narrative style and metaphors) with which clients formulate their problems (Epston & White, 1992; S. Sue, 1998). Therapists need to accurately employ clients' narratives as a means to enhance therapeutic communication. As clients describe their understandings, therapists start identifying variables that exacerbate problems as well as methods and situations that decrease them. This information is the foundation to design a therapeutic intervention that is consistent with clients' beliefs and narratives.

Often during the beginning of psychotherapy clinicians take a more active, objective, and structured approach. This expert stance allows therapists to teach clients to solve their problems. Consistent with culturally competent models that emphasize an awareness of power differentials, it is hoped that therapeutic relationships will evolve towards an egalitarian relationship or one in which clients are leading the therapeutic process, though this is rarely the case during the beginning stages of psychotherapy. Often, the power dynamics in the first sessions reflect those of the larger society in which therapists are constructed as the dominant figure and not following this cultural expectation too soon can generate anxiety and confusion. Furthermore, in the beginning stages of treatment, therapists and clients do not know each other so it is difficult to talk about intimate issues like relationships. Consistent with this initial expert stance is the delivery of psychoeducational information that normalizes or explains clients' conditions (e.g., muscular tension, stress) and the employment of behavioral directives (e.g., breathing exercises, improving diet, reducing caffeine intake). During this first stage, clients are often also interested in learning ways to regulate their affect; for example, clients seem to benefit from learning impulse control techniques or rehearsing relaxation techniques. Although cognitive behavioral therapy and behavioral techniques are clinically useful, they also often entail a power differential between therapists (the expert) and clients (the one with the problem) that needs to be acknowledged. The employment of these techniques is a unique opportunity to start exploring clients' experience with, and responses to, power differentials in their everyday life context. A growing awareness of these power imbalances within the therapeutic relationship is useful to understand how psychotherapy can mirror society's power dynamics.

As advocated by the APA Multicultural Guidelines (2003), in CCPP the meanings of important cultural characteristics such as race, ethnicity, gender, and religion should also be explored during the first stages of psychotherapy – particularly if they differ from the therapists' characteristics (La Roche & Maxie, 2003). The process of exploring and addressing cultural differences is not only a unique opportunity to explore the psychotherapeutic relationship, but also the influence the sociocultural context has upon this relationship (La Roche & Christopher, 2008; La Roche & Maxie, 2003). It is important that clients know they can discuss the influence of cultural differences (e.g., race, ethnicity, gender, sexual orientation, religion) from the onset of the therapeutic relationship. Although most clients may decide to discuss other issues first, the message conveyed is that cultural issues are relevant and that they can be discussed at any point.

The APA Multicultural Guidelines (2003) also clearly suggest that psychologists should not try to shape their worldviews to conform to those of clients, but rather that they have an

awareness of their own worldview, thereby enabling them to understand others' frame of cultural reference. It is hoped, however, that individuals can reduce the impact of possible negative and stereotyped cultural views through conscious effort. The first step is to recognize that such attitudes can exist and make an effort to communicate and work with members of the marginalized group (APA, 2003, Guideline 1). As clinicians, we can push back against these implicit prejudices by seeking out close and positive relationships or experiences with individuals from marginalized groups (Lehrman, 2006).

Similarly, from a CCPP framework clients and clinicians negotiate ways of working together that are mutually agreeable and likely to lead to positive outcomes. Clients can have strong preferences for types of treatment and desired outcomes, and these preferences are influenced by both their cultural context and individual factors. One role of the psychologist is to ensure that clients understand the costs and benefits of different practices and choices (Haynes, Devereaux, & Guyatt, 2002). Effective culturally competent practice requires balancing client preferences and the psychologist's judgment – based on available evidence and clinical expertise – to determine the most appropriate treatment. After clients' chief complaints have been met, many will decide to conclude psychotherapy, while others will articulate new goals. Sometimes, however, problem-solving is not enough. The underlying causes that triggered or exacerbated these problems may not have changed, making it likely that clients will relapse. For those clients who decide to remain in psychotherapy, it may be beneficial to explore their narratives in a more in-depth manner.

Stage II: Understanding the Client's Narrative
In this stage, client narratives and stories are explored with the goal of helping them to develop their own understandings and enhance awareness of their experiences. This narrative is an understanding that corresponds to their own experiences and goals, instead of one that is imposed on them by the dominant culture. The narratives clients construe of their experiences are the essential tools with which they view themselves, others, and the world. Clients are often unaware of how their society may have inadvertently scripted some narratives in their lives. Narratives are anchored in multicultural values that provide cultural group members with a menu of themes, symbols (verbal and non-verbal) and values (e.g., individualism, heterosexuality). Consequently, in some cultural groups certain narratives will be dominant, while others will be marginalized. It is important at this stage of treatment to articulate a central theme in most cultural competence guidelines: cultural differences in narratives and values should be seen as assets and not liabilities. Many members of culturally marginalized groups have continually had the message reinforced that their cultural beliefs – which often differ from the dominant culture – are somehow inferior or pathological. In CCPP, clients share their narratives and what is at stake for them in their local social world (Lakes et al., 2006).

As means for clients to develop their narratives, three goals are sought: first, to help clients identify some of the main themes in their narratives including their cultural values and how they relate to the dominant culture; second, to explore and question these understandings including those of the therapist, and; third, to accept, enrich and/or develop alternative models to understand their lives. A central objective of this second stage is to understand the clients' narratives as well as how they impact the therapeutic relationship, and how these narratives are located within the larger story. According to Mattingly (2008), when clinical encounters are successful it is because the practitioner and client are able to read each other well and/or create a shared narrative. Mattingly's idea is reminiscent of Winnicot's (1969) holding environment in

which the therapeutic relationship allows clients to cope with their anxieties. When clinical encounters are unproductive or unpleasant, significant mistakes are likely made in interpreting other's behaviors, or, as Mattingly stated, mistakes occur in narrative mind reading.

Although narratives are explored from the onset of the psychotherapeutic process, they are only explored in depth and in detail after two conditions are met. First, it must be ensured that clients are safe (e.g., not presenting psychotic symptoms, suicidal ideation, or domestic violence). Clients need to have some level of affect regulation to effectively cope with their daily stresses. Many clients may, for example, resume experiencing flashbacks or using substances after describing an experience of discrimination or trauma. Second, as noted above, clients need to experience the psychotherapeutic relationship as a "holding environment" in which they can trust the therapist and the psychotherapeutic process. These conditions can be met early in the process, but often they need to be revisited at different points in the therapeutic relationship.

The narrative review begins with a description of the client's life; they are encouraged to describe not only their current situations and the circumstances that led up to their current problems, but also the goals and experiences before the reported problems (e.g., family dynamics, community interactions). It is often useful to understand the meanings they have generated in response to significant life events. The central goal is to identify common themes about themselves, others, relationships, and the world (e.g., social injustices, socioeconomic inequities). Often when clients talk about injustices, it is important to not only involve the unjust events themselves and their own reactions (including thoughts and feelings), but also the responses of their significant others to these injustices or losses. Strengths and alternative ways of coping as well as cultural resources are explored. The therapist clarifies different perspectives, and shares the emotional burden of the injustices. When therapists validate and normalize clients' responses they share the burden of the injustices faced by clients through their empathic stance (Herman, 1992). A holding environment that allows clients to assimilate or retranscribe separate, divergent, and traumatic experiences is necessary for this process to occur (Horowitz, 1986).

Occasionally during this second stage clients construe therapists – regardless of their cultural affiliations – as members of the privileged or dominant group (La Roche, 1999). This transferential response may transform the therapeutic relationship into an adversarial one. The intensity of this conflict seems to be inversely related to the therapist's cultural similarity, including, for example, socioeconomic, gender orientation, skin color, religious background, language fluency, and educational level (La Roche & Maxie, 2003). Such transferential responses, particularly anger or frustration, need to be explored and validated. Within the holding environment of psychotherapy, clients can finally have an opportunity to articulate and further understand these feelings. Moreover, by talking about these experiences clients can also explore their own perceptions and feelings about dominant groups and society's power dynamics. This negative transferential response is a unique opportunity to address feelings of marginalization and discrimination because they are microcosms of larger social dynamics. Unfortunately, many clinicians respond to this questioning with a negative countertransferential tone that may be detrimental to the therapeutic relationship. In this phase of CCPP, the core cultural competence principle of an awareness of one's own cultural biases (e.g., D. W. Sue & D. Sue, 2007) is particularly helpful in preventing this from happening. Clinicians who are sensitive to their own cultural assumptions will more effectively prevent cultural stereotypes (e.g., African-Americans are angry and explosive) from being expressed countertransferentially (La Roche, 1999) and explore these intense negative responses. As clients become more able to question

therapists, they will gradually be able to question other social structures. Therefore, the therapy space can serve as a venue for marginalized clients to understand how their voices can influence not only therapists' views, but also the larger social world, rather than remaining silent and marginalized. This questioning is crucial for the empowerment process to unfold.

However, the narratives co-constructed within the therapeutic relationship are limited by the constraints of the setting. A strategy that may expand and challenge these narratives is to bring clients' partners, family members, and friends to the sessions or seek information from different contexts (groups or family therapy). This recommendation provides a method through which therapists can operationalize the APA Multicultural Guidelines (2003) and offer guidance for therapists to be informed of clients' contexts. In child psychotherapy, it is a must to glean information from different settings (family and school) and we also believe that it is crucial to do so when clients are from a different cultural background because of the importance of the family among members of many minority groups. Unfortunately, with adult clients the need to broaden and dynamize our perspectives by including a multisystemic ecological approach is often neglected. An additional way to explore the environment is through family pictures, news, or other contextual information that can be welcomed within the session. As clients describe their contexts, the application Google Earth™, for example, can be used for both clients and clinicians to visualize their comments within specific neighborhoods. The Internet and other technological tools have untapped potential within culturally competent psychotherapy. Similarly, therapists should recognize that culturally competent therapy may require nontraditional interventions and should strive to apply this flexibility in their practice (D. W. Sue & D. Sue, 2007; D. W. Sue et al., 1998). This may include inviting recognized helpers (e.g., community elders, folk healers, etc.) to assist in fostering the shared narratives process and in implementing sensitive interventions. The APA Multicultural Guidelines (2003) also encourage therapists to participate in culturally diverse and culture-specific activities and seek out community leaders, change agents, and influential individuals when appropriate, enlisting their assistance with clients as part of a total family or community-centered (healing) approach (Arredondo et al., 1996).

As clients become increasingly aware of their narratives, they also start questioning their applicability to different situations. Clients may discover that some narratives may be more applicable in some situations, while others are less useful. This questioning has the potential to open the client to consider alternative narratives that may have otherwise not been considered. As clients develop the capacity to revise and act upon these understandings and acknowledge how they are embedded within specific cultural contexts, clients may start feeling more empowered.

Stage III: Fostering Empowerment

The empowerment stage involves an awakening of social consciousness – a realistic awareness of one's sociocultural environment and experience – which gradually leads to a desire to transform oneself and one's context. A condition for empowerment to occur is the clients' awareness of the socioeconomic, historical, and cultural forces defining society. Only with this knowledge will they be able to alter their contexts. Thus, it is imperative that sociocultural issues be discussed within the therapeutic setting (La Roche, 1999). Some clients who have this sociocultural knowledge (and who do not have a high risk for relapse) will move quickly to the empowerment stage after developing a relationship with their therapist, without investing a significant amount of time in the first stages.

As clients narrate some of the injustices they have experienced while dealing with their socioeconomic environment (e.g., discrimination, sexism, economic inequalities, materialism), they realize they can refuse to conform to a marginalizing and oppressive status quo. This is particularly likely if they have challenged some dominant narratives or some of their clinicians' cultural assumptions. Social injustices can have paradoxical effects; the injustices that once hindered development and growth can now fuel the client's quest to overcome difficulties and new challenges. Their struggles are illuminated by new meanings and are often motivated by a desire to prevent others from suffering similar misfortunes and deprivations.

An increased social awareness may also enhance clients' abilities to perceive the complexity of social situations. They further understand that each social context has a distinct set of expectations and rules and that behavior may be understood differently in each context. This is particularly important with ethnic minorities whose experience is grounded in multiple cultural contexts, each influencing the way in which they make sense of the world. However, acknowledging the experiences evoked by each context is important, but not sufficient alone for change to occur. Clients can benefit if they explore and experiment with different behavioral strategies to intervene in their environments. It may be helpful to predict in advance that such experimentation may cause some anxiety and disappointment. However, these challenges may allow clients to develop a renewed sense of agency over their environment while fostering a reinvigorated sense of hope and power. Rather than seeking homeostasis, clients can proactively seek stimulation and new challenges.

During this stage, CCPP becomes more open-ended, less structured, and less frequent. Clients direct their treatment and the ways in which goals are pursued (e.g., meeting once a month to talk about social justice or relapse prevention techniques). Therapists offer feedback and ideas and will increasingly attempt to contextualize these suggestions as means for clients to identify possible cultural biases. Furthermore, therapists may also share some of their own views that influenced the psychotherapeutic relationship, making the dialogue between clients and therapists more genuine. For example, in the case illustration presented later in this chapter, the therapist acknowledged his lack of understanding of what it is to live in "the projects". The therapeutic relationship gradually becomes a collaborative partnership, far from the more directive stance described in the first stage. Similarly, the NCSPP (2007) competency standards underscore the importance of training psychologists to understand the constructs of power, oppression and privilege, their impact and the psychologists' role in promoting social justice, and as advocated by the APA Multicultural Guidelines (2003), psychologists are encouraged to engage in social justice work that derives from knowledge of contextual influences on various groups of marginalized individuals because this work can help foster an appreciation and respect for broader social and cultural conditions (Constantine & D. W. Sue, 2005).

As clients become more empowered, they may choose to end therapy. During termination clients need to review their achievements and challenges, the evolution of the therapeutic relationship, as well as their cultural contexts. Furthermore, therapists can genuinely share some of the ways in which the client has impacted him or her and the therapeutic relationship.

4.6   Clinical Illustration: Mary

At the time of treatment, Mary was a 55-year-old, unemployed, disabled, African-American woman who was seen therapy by one of us (ML). She was referred by Dr. R, her primary care

physician (PCP), who stated that "she was presenting with significant back pains with no structural damage," meaning that her pain was likely "psychosomatic." Mary, in contrast, explained that she was coming to therapy because Dr. R. had said "nice things about you" and that she had also heard that I "had helped many people." She hoped I could help her with her back pain. Mary explained that her back pain was so intense that at times she could not walk; often her back "burned" particularly during the morning. Burning back pain, Mary clarified, meant paralyzing and unbearable pain for long periods of time. When it "burned," nothing could stop the pain. Throughout the first sessions she repeated "nothing works." Furthermore, even though Mary believed her PCP was a "nice woman" she explained that "she can't do more for me." Although Dr. R. had explained that her back pain was not related to a general physical condition, Mary was persistent in her belief that her pain was due to structural damage.

Mary was a single mother of four children, one of who "died some time ago," and a grandmother of seven. Three of her grandchildren were currently living with her. Given her back pain, she had been classified by the state as disabled and had been receiving social security benefits for the last 4 years. She had worked at the counter of a store for over 10 years until her back pain intensified so much that she could no longer stand for extended periods of time.

As I proceeded to assess her mental status, she denied feelings of depression or anxiety, although at times she would cry for no apparent reason. She reported having frequent insomnia, fatigue, and occasional memory and concentration difficulties. Mary denied psychotic and manic symptoms, depressive episodes, panic attacks as well as alcohol and substance use. She reported having a good appetite and denied any significant relational problems with her family. Many of my initial questions were somewhat structured and directive. I was attempting to glean objective information – consistent with the individualistic dimension – that would suggest a Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (American Psychiatric Association, fourth edition, 1994) diagnosis. After reaching a tentative diagnosis of an undifferentiated somatoform disorder, I proceeded to further explore her explanations of her back pain.

Mary explained that her back pain began 4 years ago and I inquired if she remembered anything occurring at that time, and she could not. Mary continued to explain that she did not understand why the pain had started. However, I continued to address her chief complaint in accordance with her belief that it had a biological/structural component, while gradually exploring additional possibilities. Nonetheless, not understanding the causes of her pain made me fear that the psychotherapeutic process would be slow, and thus I stated that it might take a while to reduce the back pain and that I would have to get to know her and her medical history better before her back pain improved. To accomplish this goal I asked her if we could meet for weekly appointments and she agreed.

We also agreed that it was a good idea to read her medical chart and exams, and to consult with her doctors to attempt to have some understanding of her complex medical history. Concomitantly, she agreed to explore any daily activities that might be related to her back pain. Given that her back pain seemed to fluctuate during the day, I explained that she might find an activity such as talking with friends, watching television, or walking that could potentially diminish her back pain. She soon realized that the way she slept was related to her back pain and concluded "bad sleep equals bad pain."

Thus, we began working on behavioral strategies to decrease her insomnia. I taught her some sleep hygiene strategies (e.g., a consistent wake time) and encouraged healthy habits (e.g., encouraging her to walk, eat well, and reduce the number of cigarettes smoked per day). During this time, she used a behavioral chart and monitored her back pain fluctuations.

She identified antecedent thoughts/feelings/behaviors/situations that were related to her insomnia. Mary also explored what activities were useful to prevent a bad night. For example, she found that if she slept on a flat surface and went to bed at 11:00 pm rather than 9:30 pm she would sleep better.

At this early stage in treatment, although Mary had experienced some minor symptom relief, I realized that I had only explored individualistic issues and consequently only used individualistic interventions (e.g., CBT, psychoeducational strategies). Thus, I began to explore the influence of the therapeutic relationship and the cultural context. Mary immediately described how crime was rising in the projects in which she lived. She also explained how little she could buy with her social security check and how the projects were being taken over by new people, namely Hispanics. Mary quickly apologized, realizing that I was Hispanic. I rapidly thanked her for being honest and told her that it was okay to talk about these issues too. I told her that if psychotherapy was to be successful, we needed to talk honestly and freely. I also suggested that it might be hard to talk about these issues with someone from a different background, particularly given that Hispanics seem to be taking over the projects. Mary nodded.

As she gained increased control over her back pain, we further explored her narratives in more detail suggesting that we were in the second stage. I again inquired if anything significant had happened 4 years ago; "Not that I can remember" she immediately responded. However, her eyes welled up and within seconds cried "Tommy was shot! Oh my God, my Tommy!" After 15 minutes of intense sobbing she explained that she did not like to talk about Tommy. She explained that it was not only hard to stop crying, but "people are sick of my crying." However, all she really wanted was to talk about Tommy because she missed him so much.

During the following sessions, we repeatedly talked about Tommy. Mary described not only the day in which Tommy was shot at "Death Alley" – a corner in which drugs were trafficked – but also many memories of his childhood. By telling and retelling the details of Tommy's life and death, she explored many feelings that had been overwhelming her for the last 4 years. Mary traced her back pain to Tommy's murder. She described how her body had felt unbearably heavy and the intense burning pain that had overwhelmed her. Mary said "I wanted to scream, explode but nothing would bring my Tommy back, nothing works." In future sessions we talked about her experience of "nothing works" and soon identified several additional earlier experiences that seemed related to this hopeless feeling. Her father had abandoned her, she had experienced domestic violence, and living in poverty had severely limited her choices. Mary talked about how hard she had worked to move out but she had not been able to afford a house in a different neighborhood. In tears, she explained that "if I had been able to move, Tommy would be alive."

During the following sessions, Mary would cry for the first half an hour as she talked about Tommy; however gradually, the number of minutes seemed to decrease as she realized that she could in fact control her tears. She soon realized that one of her prominent narratives was that she was blaming herself for Tommy's death. Using a psychodynamic frame it could be said that her guilt was internalized and somatized; a CBT approach would focus on challenging Mary's maladaptive guilt. However, the common denominator of these individualistic models is that they would focus on changing Mary's guilt in isolation from her context. However, using the proposed multidimensional model, we also proceeded to explore the contextual conditions in which Tommy's murder occurred. It coincided with a summer in which violent deaths had increased exponentially in Boston. She remembered that 4 years prior the state of Massachusetts had experienced a significant fiscal deficit resulting in substantial cuts in social services.

Increasingly angry, she described how there were more young African-American men in jail than in college – a remnant of slavery in the US, she added. Furthermore, she noted that African-Americans were smoking more, had poorer health and were dying at earlier ages than Whites, not only because of health issues but also because of violent deaths. Although Mary had repeatedly reported being "hooked on cigarettes," this contextual awareness helped her to stop smoking. As she became more aware of the socioeconomic, cultural, and historic forces related to Tommy's death, she felt less guilty and less responsible for his death.

Six months after the beginning of therapy and about six sessions after she started talking about Tommy, Mary was again detailing feelings of pain and grief and I told her "I understand how painful it is." She angrily stared at me and said "Do you really understand? Have any of your children been murdered? Shot! No you don't understand! How can you dare say that you understand. No one knows what it is to lose a child until they lose one! You don't even understand what it is to live in the projects. You know, you can get shot any time, did you know that?" Nervously aware of my hasty comment, I hoped to transform my mistake into a corrective experience (Kohut, 1984) and nodded in an attempt to validate her anger towards me. Mary went on to explain the intense pain she felt when she realized that her son was shot – the unbearable burning pain that would not die. Mary then described how many people had started avoiding her because she was "crazy." Even her preacher had gotten tired of her and Mary was ostracized from her church for stating that she would kill her son's murderer and that she would never forgive him. She then proceeded to talk about many incidents in which she had been "put aside" and "discriminated by White and Hispanic folks." As the session ended, she seemed relieved.

During the beginning of the next session she seemed tentative and embarrassed. I thanked her for her honesty in an attempt to validate her comments and added "you know I have been thinking of what you said and I do think you are right. I do not know what it is to lose a child … even the passing thought of losing one of them is unbearable for me. I do not think I could survive as you have."

After a few minutes, she apologized for the angry tone in which she had "accused" me. However, I again attempted to validate her experience and thanked her for her honesty and explained "It's about time you show your anger. I think you have much to be angry about and you can clearly have the right to be angry at me" – attempting to acknowledge the relational dimension and my blunder, I then added – "but also anger toward all those people who have avoided you and even more so at the government that seems to be more concerned with making rich people richer than people living in the projects." My last comment attempted to include the sociopolitical and economic forces involved in Tommy's death. Mary explained that people were turned off by her anger and described how people at her church had stopped calling her not because of her lack of faith but because of her alleged craziness. I then assumed that she feared that I would stop seeing her because of her anger, thus I said "I don't think you are crazy, I think you have suffered much and I am glad we can talk about your anger, you have a right to be angry and it's about time it comes out!" Within the holding environment of the psychotherapeutic relationship I was not only attempting to validate her intense feelings of loss and anger, but also develop multiple understandings of her tragedy and grief.

After this incident she began to address gender and ethnic differences more openly with me. She described her resentment towards Hispanics and many men who had taken advantage of her. As she exposed this anger, it started to fade and she eventually began to make efforts to

meet some of her new Hispanic neighbors. Similarly, she started rehearsing different strategies to assert herself with people who were taking her for granted, like her daughters who assumed that she was responsible for babysitting her grandchildren at any time or day. Two of her daughters joined several sessions and informed me of Mary's improvements and continued issues (e.g., increased "selfishness"). However, Mary used these meetings as opportunities to practice her assertiveness skills. Gradually these family meetings became an opportunity for her family to openly talk about Tommy's death and continue the grieving process.

As Mary's symptoms abated, we agreed to reduce the frequency of the psychotherapeutic appointments, to once every 2 weeks. Soon thereafter Mary reported tearfully that another adolescent, a 14 year-old boy had been shot in "Death Alley". Her intense grief, anger and back pain instantly resumed.

After exploring, normalizing and helping Mary control the reemergence of her grief – partly by her enhanced understanding how the death of the adolescent had retriggered her past experiences of loss – we talked about what could be done to stop the shootings in her neighborhood. After one minute of thinking of what could be done to stop the violence, Mary decided to visit the mother of the teenager to provide her with the support she never got when she grieved over losing Tommy.

During the next session, Mary reported that she had not only met the mother of the 14-year-old boy, but also a handful of other mothers whose sons were murdered. She kept their telephone numbers and a few months later we started a group of grieving mothers within the health center. Instead of calling themselves a grief group they named it the "No B.S. Group." Mary was key in encouraging other mothers to participate. Several months later, this group was occurring within the projects and had more than six consistent members although often others would attend (one group consisted of 24 adults). The group members not only shared their grief, pains and frustrations, but they also gradually became interested in stopping the rapid spread of street violence within the projects.

During group meetings Mary had repeatedly underscored the fact that it was not the mothers' fault that their sons had been shot, but the influence of factors such as poverty, cuts in social programs, prevalence of drugs, and the war in Iraq. Instead of blaming themselves, group members started channeling their pain into concrete ways to transform their neighborhood; they invited professionals to speak about violence and volunteered for drug prevention programs. As experts in community violence started educating parents about what to do if their children had guns or if they joined gangs, several group members marched to "Death Alley" and talked with gang members.

Unfortunately, the "No B.S. Group" eventually stopped meeting after Mary's death. She was buried 6 weeks after being diagnosed with lung cancer. However, during Mary's last weeks she seemed to have reached a state of peace and grace. The last time I saw her alive, she said that Tommy was thanking me for the love I had given her. She described how Tommy was now holding her hand. As Mary's eyes shined, she stated she no longer had any fear or pain. Fearing it was the last time I would see her, in tears I thanked her – and maybe Tommy too – for her love and all I had learned with her.

Although the grief group dissolved shortly after Mary passed away, it had a lasting impact on its members and on the community during the time it existed. After her death, I met with her devastated family, and I continued to treat one of them in psychotherapy. This time, Mary's family openly grieved for her. At times, it seemed almost as though she was in these family sessions.

Much remains to be done to help the community in which both Mary and Tommy lived and died. It is our hope that these therapeutic recommendations may help this process.

4.7   Summary

The ideas sketched herein are in development and intended to complement psychotherapeutic models by elucidating the importance, as well as the complexity, of infusing culturally competent practices into the psychotherapeutic relationship. Specifically, we suggest that psychologists formulate clients' issues using a multidimensional model that includes the cultural context. Our aim was to present this multidimensional model while highlighting key features of cultural competency guidelines and models, arguing that cultural considerations are an essential component of any therapeutic intervention. All psychotherapies are anchored in multiple cultural contexts; thus, this model is not only applicable to racial and ethnic minorities but to all individuals. It is argued that each dimension offers a narrow range of understandings and options; however, the consideration of multiple perspectives opens the way to a fuller interchange of narratives and potentials. As clients and therapists become increasingly cognizant of different perspectives, they can chose to accept current ideas or create alternative ways of being and relating that are more consistent with their goals and needs. During the early sessions working with Mary, for example, I realized that I was only focusing on individualistic formulations (e.g., CBT, psychoeducation). Upon this realization, I proceeded to include her cultural contexts both within and outside of the psychotherapeutic relationship, which allowed Mary to contextualize her guilt and question the limitations of the psychotherapeutic relationship. By using the three described dimensions, Mary was able to broaden the meaning of Tommy's death, and this not only allowed her to cope with her grief but also empowered her to improve her community. It is, however, important to note that the proposed ideas have numerous limitations, several of which are addressed below.

A primary limitation in the developing area of CCPP is the lack of empirical evidence in support of cultural competence guidelines (Arredondo & Toporek, 2004; S. Sue, 2003). Despite the acknowledged need for mental health care to incorporate a cultural perspective, there are significant empirical and conceptual limitations to the study of cultural competence. Currently, there is no evidence that clinicians who adhere to a given culturally competent approach provide better mental health care than those clinicians who do not adhere to such an approach. Although it may be commonsense that experiences are embedded within cultural contexts, much research is needed to assess the specific links between clients' narratives and their cultural contexts (Lakes et al., 2006). Moreover, it is not clear if these ideas are helpful in healing clients or changing environments. Although the case presented here provides anecdotal evidence of the positive impact of including contextual issues in treatment, objective measures to assess clients' ability to change their environments are not currently available. Clearly, much research remains to be done to assess these ideas.

It is also important to place these ideas into a geographical, sociopolitical, and historical contexts. These are times in which economic markets are expanding across borders, fostering an interlinked, globalized economy in which business exchanges are coupled with an increased cultural awareness. It is not only that economic commodities are moving about the globe, but also cultural artifacts and ideas. As cars, cigarettes, and computers are imported and exported so are cultural values, ideas, and tastes. It is not surprising, then, within the

context of accelerated financial exchanges, an enhanced number of multicultural bridges are being built, which attempt to make sense of these contradictory set of voices, ideas, and products consequently implicitly supporting the growth of the prevalent global economic system.

Although consistent with socio-constructive perspectives, the proposed CCPP model aims to challenge oppressive social situations (in Mary's case to become more active in stopping street violence); however, an in-depth cultural questioning of this model should not be omitted because of this goal. On the contrary, it is necessary to be even more suspicious of the goals in the name of social justice, as they could potentially support different types of subjugation. For example, perhaps Mary's treatment could have focused more on the influence of advertisements and smoking on ethnic minority communities. By focusing on Mary's individual issues, was the influence of an inequitable socioeconomic context in which violence and health disparities are widening de-emphasized? Cultural competence models intend to bring questions like this to the forefront and let clients decide which issues are significant for them. Only through a profound and thorough analysis of the possible advantages and disadvantages of these ideas can we start to propose a more refined set of clinical guidelines that will transform our clients, ourselves, our clinical work, and our cultural contexts.

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5 Relationships

Sandra Jenkins

Abstract: The therapeutic alliance, or working alliance, has been shown to be reliably predictive of therapy outcome. The therapy relationship is, conceivably, the most significant variable in the treatment process. This appears to be so regardless of theoretical orientation or treatment method. As an area research studies have focused on defining the construct, methods of measurement, issues of validity and reliability and development of proper research designs. While much work is still needed in all of these areas, consensus does exits that there is a high correlation between the quality of the therapy relationship and a successful conclusion to treatment.

   As would be expected, identifying the complex elements of the therapy relationship has been the subject of much examination in the literature. For the purposes of this chapter the components have been limited to the influence of: therapist/client variables, attachment styles, cultural variables, theoretical orientations, relationship congruence, alliance ruptures and the focus of relational analysis. Attention is also paid to crucial non-verbal elements.

   The overall quality of the relationship, e.g., whether or not the therapy participants are able to establish and maintain feelings of mutual trust, fondness and respect, is vital to the formation of a strong therapeutic bond. As is true in any relationship, the therapy alliance is an interactive phenomenon that is difficult to define and precisely measure, however, certain relational skills and competencies have been identified as essential to alliance formation. Basic competencies include self-awareness, empathic and genuine responding, maintaining relationship congruence and proper role boundaries, and interpersonal styles. Expert competencies include cultural competencies, knowledge of how to identify and repair alliance ruptures, negotiating treatment impasses, and how to utilize analysis of the relationship as part of the treatment. Case examples are offered to illustrate each of the Basic and Expert competencies.

5.1   Overview

Numerous research studies have shown that the *therapy alliance* is predictive of the outcome; in fact, no other variable has been found to be as significantly associated with treatment outcomes as therapy alliance. Meta-analysis studies have shown that treatment effect sizes have varied between 0.21 and 0.29 (Castonquay, Constantino, & Holtforth, 2006). Overall, studies have shown that the alliance consistently accounts for 4–26% of the variance (Lambert & Barley, 2002; Crits-Christoph, Gibbons, & Hearon, 2006; Hardy, Cahill, & Barkham, 2007). As Castonquay et al. put it, "although the size of the relationship is not large, it appears to be robust" (p. 272). No other treatment process variable has been so meticulously researched. A database check using "therapeutic alliance" as the key search term produced 3,350 citations of books and articles. Most of these citations were produced within the last 20 years or so. To underscore the significance of the therapy relationship, the therapeutic alliance has been shown to be highly correlated with treatment outcomes regardless of treatment modalities.

The emphasis on the alliance as an outcome variable began to emerge when it became clear, through numerous outcome studies, that different therapists, using the same treatment methods, consistently produced different results. It also became clear that no treatment technique was significantly superior to any other. The therapy alliance appears to be the only variable that remains a stable predicator of the treatment outcome across treatment methods, leading to the necessity to focus outcome inquiry on personal and interpersonal interaction variables (Horvath & Bedi, 2002).

As with any complex treatment method, defining elements of construct validity and reliable measurement can be an intricate process. There is still much work to be done to identify and sort out several key validity and measurement concerns (Safran & Muran, 2006). A comprehensive overview and examination of the research literature, conducted by Lambert and Barley (2002), noted that research efforts have focused on understanding why the alliance has been such a potent variable in treatment outcomes and in defining the construct. Many research studies have concentrated on identifying the crucial components. What is the treatment alliance? Researchers have generally tended to focus on certain cognitive, affective, and interpersonal components, but there is no current agreement about, let alone integration of, the necessary factors.

Cognitive components include those interactions that lead to successful, collaborative agreement for treatment goals, objectives, and techniques. Other cognitive elements include understanding and agreeing on mutual role and outcome expectations and the client's preferences for possible treatment modalities (Iacoviello et al., 2007). Affective elements that have been explored are mainly those posited by humanist models, i.e., empathy, genuineness, nonpossessive warmth, positive regard, and acceptance, etc. These affective elements have also been termed the "facilitative conditions." Interpersonal components include different interpersonal styles, therapist's credibility, and possession of adequate therapy skills. While there appears to be a consensus in the literature that these elements are important, researchers still disagree on the definitive list of elements (Lambert & Barley, 2002).

Measurement of the alliance also presents researchers with a complex array of instruments and statistical data, such that consensus about the list of reliable measures is lacking. Horvath and Bedi (2002) offer a historical overview of the research conducted with alliance instruments developed by several authors over a 20-year period. Drawing upon different theoretical orientations (e.g., humanist and psychodynamic), some 24 different instruments have been developed, but the most widely cited, or at least most focused upon by Horvath and Bedi, include, The Penn Helping Alliance (HA), the Vanderbilt Therapeutic Alliance Scale (VTAS), the Working Alliance Inventory (WAI), the Therapeutic Alliance Rating Scale (TARS) and the California Psychotherapy Alliance Scale (CALPAS). Perhaps the most widely used is the WAI, developed by Horvath and Greenberg (1986).

All of the existing measures are based on self-report items that have been recorded outside the actual therapy sessions. To date there is no in vivo method for measuring the alliance as it unfolds in the therapy work itself. This means that there is no way to measure the alliance as a function of the interactional relational situation. Independence of measurements has also produced the perplexing results that therapists and clients often do not rate the alliance in the same way or agree on the extent to which an alliance has been achieved (Wintersteen, Mensinger, & Diamond, 2007; Kivlighan, 2007). This has been explained as having to do to with the tendency of therapists to base their assessment of the relationship on their individual

training backgrounds, while clients may be largely influenced by their individual pretreatment expectations. There is no existing consensus to either explain such phenomenon or account for its impact on outcome studies.

Another problem is the fact that alliance ratings differ depending on when in the treatment process the measurements are taken. Two problems needed to be addressed. First, there was the real possibility that measurements taken toward the middle or end of the therapy reflected more accurately the client's satisfaction with therapy effects, or "reverse causation" (i.e., symptom relief was attributed to a successful therapy bond). This presented some problem with possible confounding of variables. Another phenomenon was the discovery of the "U" and "V" shapes, showing a high alliance rating, followed by a dip, followed by an upward incline in ratings. This "rupture-resolution" pattern suggested that a positive alliance formed early in the treatment relationship could be the product of a "honeymoon" effect, with erosions in the bond as the therapy became characterized by work expectations producing greater stress on the participants (Kramer, de Roten, Beretta, Michel, & Despland, 2008). Research conducted by a number of authors appears to have resolved both of these concerns by consistently demonstrating that obtaining alliance ratings at the end of the third and/or fourth sessions produces results highly predictive of outcomes.

While there is some overlap between constructs (i.e., most scales incorporate personal, affective, interpersonal, and collaborative components, the scales are essentially measuring different constructs, or assigning different weights to different components). Despite this fact, there is evidence of medium to high intercorrelation between the measures (0.34–0.82). The main problem is that without consensus on the constructs to be measured, the test instruments become a de facto way of selecting for, and defining, components. That is, the components become defined by whatever the instrument measures, rather than the other way around. This means that construct validity is still an important research problem (Horvath & Bedi, 2002).

Regardless of the problems with clarifying construct and measurement issues, the therapy alliance holds up as the single most predictive outcome variable. This is true to such an extent that it is now considered an area for psychotherapist training along with training in specific therapy modalities. As awareness of the connection between the *relationship context* and treatment outcomes has increased, professional associations have begun to focus on relationship skills as crucial to professional training programs.

The American Psychological Association (APA) convened the *Competencies Conference: Future Directions in Education and Credentialing in Professional Psychology* in 2002. The conference resulted in a set of competency domains deemed important to graduate training and these included relationship/interpersonal skills, among others, that are considered necessary for adequate professional functioning (Hatcher & Lassiter, 2007). The membership of The National Council of Schools and Programs in Professional Psychology (NCSPP) approved the *Competency Developmental Achievement Levels (DALs)* in 2007. Among the NCSPP competencies, *relationship competency* is acknowledged as fundamental to all other competencies (i.e., assessment, intervention, diversity, etc.) (NCSPP, 2007).

Conceptually, if psychotherapy is a cognitive, behavioral, and affective journey toward happier and healthier functioning, then the psychotherapy relationship is the vehicle in which the journey takes place. The general meaning of the word relationship is the connection of two or more things or parts belonging or working together (loosely referring to Webster's dictionary). Connection implies interrelatedness, where each part impacts or affects the other. Human

connection implies a sense of meaning or mindfulness. Relationship can be broadly defined (e.g., my various personal, social, and professional relationships are all meaningful long-standing relationships, but the same is true of my relationships with a tree in my backyard and my relationship with my dog).

Generally speaking, two aspects comprise the therapy relationship, the "real" relationship and the "professional" relationship. The *real relationship* in psychotherapy is the more informal bond that exists when any two or more persons connect. The real relationship is shaped by individual characteristics such as personalities, interpersonal styles, values, expectations, and demographic features (i.e., age, gender, ethnicity, education levels, etc.). The real relationship acts as the foundation or backdrop for the professional relationship. The *professional relationship* is shaped by more formal structures such as treatment methods, length, and number of appointments, assessment measures, and legal and ethical standards. Each relational aspect, real and professional, coexists simultaneously to form the quality of the therapy relationship, otherwise referred to as the *treatment alliance* (Gelso et al., 2005).

The therapy *relationship* and therapy *alliance* are terms that are often used interchangeably. The therapy relationship usually refers to all of the relational aspects of the therapy situation. Any interpersonal interactions occurring within the treatment context can be part of what is meant by "the relationship" and these interactions can be separated into two components: emotional/affective and role/professional components. Professional roles include interviewing, assessment, testing, diagnosis, charging a fee, setting goals, interventions, assigning homework etc. All of these behaviors occur within an interpersonal interaction between the client and the therapist according to their respective roles in the treatment context. The relationship is also shaped by the extent of emotional bonding as well as designated professional role behaviors (i.e., the feelings that each person feels for the other and how they each feel about their respective roles). The formation and development of the relationship are dependent on the contributions of both the therapist and the client. Both contribute certain expectations, goals, desires, and personal history characteristics to the process of engagement (Meissner, 2007).

The therapy alliance is formed by mutual engagement in the therapy relationship. The term "therapeutic alliance" is usually refers to the quality of both the affective and the professional role bonding between the therapist and the client and the resulting establishment of an agreed upon commitment to the therapy work. Alliance aspects include the extent to which the therapist and the client are able to collaboratively agree on a focus or goals for the treatment, and the degree to which they are both able to establish positive or hopeful feelings about working together. The alliance can also be defined by the extent of mutual trust and respect that is established between the two and the amount of openness and candidness with which the two participants communicate with one another (Samstag, 2006).

It is true that researchers are only beginning to focus on specifically defining the fundamental components of the therapy alliance, as well as the key concepts in the development of the therapy relationship. While much remains to be done in this area, some themes are repetitive enough in the literature that certain "agreed upon" elements can be identified.

5.1.1 The Therapy Relationship: Frequently Cited Elements

Some commonly cited elements emerge while perusing the literature and reflecting on my own clinical practice perspectives. Therapist and client variables are obvious elements. Essentially,

there is little disagreement that therapy works best when both participants are interpersonally competent or adequate to do the job. Much attention has also been paid to other variables including attachment styles, cultural variables, theoretical orientations, relationship congruence, alliance ruptures, and the focus of analysis (you, me, or we).

5.1.1.1 Therapist and Client Variables

Research has shown that certain therapist and client characteristics contribute to the formation of a strong therapeutic alliance. Every practitioner and client brings his or her own personhood to the treatment situation. We all have our own unique personalities, interpersonal styles, values, relationship needs, expectations, hopes, and capacity for intimacy. The treatment relationship is created out of the attributes and characteristics that the two participants bring with them to the therapy relationship. Interpersonal difficulties and developmental deficits on the part of either or both participants can prevent the formation of an alliance and subvert success of the treatment (Crits-Christoph et al., 2006).

On the therapist end a positive alliance is indicated by the therapist's enthusiasm for working with the client, faith in his or her ability to be an effective therapist, and taking a keen interest in the client's progress. The therapist's personal abilities and qualities such as warmth, empathic attunement, genuineness, compassion, and flexibility are associated with the development of a strong, stable, and effective alliance. Research studies show that therapist characteristics associated with obstructing or weakening the alliance include rigidity, hostility, and inappropriate professional behaviors (i.e., poor boundaries, inappropriate self-disclosure, or inadequate skill levels) (Clair & Prendergast, 1994).

Corresponding client behaviors contributing to a positive alliance include regular session attendance, open disclosure of problems, receptivity to therapist's input and interventions, follow-through with home work assignments, psychological-mindedness, and enthusiastic participation in the therapy. Another crucial client variable that has been identified is the client's expectation that change will require taking on his or her share of the responsibility for change. Conversely, client characteristics such as avoidance, withdrawal, hopelessness, and rigid opposition to adhering to the therapy structure are associated with poor alliance and treatment outcomes (Liotti, 2007).

The therapist's ability to be attentive and attuned to the client's affective and cognitive expressions is crucial to the formation of a strong alliance. Nonverbal expressions should also be attended to with careful scrutiny. A commonly held belief among researchers is that our bodies communicate with each other in a particularly powerful fashion. Of interest among the physical gestures are body postures, the eyes, the mouth, the lips and hands. Also having a strong influence are the nuances communicated by the tonal qualities of the voice, e.g., pitch and volume. It should also be stressed that cultural norms must be taken into account when assessing the appropriateness of nonverbal behavior (Safran & Muran, 2000; Wallin, 2007). Respectful body postures and eye contact norms differ remarkably from culture to culture. As will be discussed at greater length in another section, the competent therapist is well informed about diverse cultural norms and standards.

As a supervisor of graduate student trainees, I watch a large number of therapy videotapes. I ask students to tape the first session with each client. I especially like to watch the first few minutes of a therapy session videotape with the sound turned off, so that I can focus exclusively on

the nonverbal nuances. How does each person (therapist and client) enter the room? Where do they sit? How do they "hold" themselves? Do they sit up straight, slouch, cross their legs, fold their arms, etc.? Is the body rigid, flexible, stiff, or expressive? Is there eye contact and is the eye contact appropriate (e.g., is the contact maintained at meaningful intervals and for the right length of time, etc.?). What cannot be readily viewed on the videotape are three vital nonverbal messages (i.e., the expression of the eyes and mouth and pitch of the voice). These messages are softer, more subtle, and highly personal. Eyes and mouth convey a wide range of emotions and attitudes. The intimacy of these expressions is sometimes so powerful that words are less adequate.

5.1.1.2 Attachment Styles

Each practitioner has her or his personal history. More importantly, we each have our individual attachment and bonding histories, starting in infancy. There is evidence that attachment styles beginning with our parent–child attachments have impact on the formation of the treatment relationship (Barber et al., 1995; Horner, 1998). The longevity of the total dependence of the human infant on caregivers has resulted in the evolution of infants with strong attachment instincts. Infants display a predisposition to readily seek bonding with others (Mitchell, 1988; Liotti, 2007).

When caregivers offer adequate attention, protection, emotional and physical comfort, and empathic attunement, infants form a secure bond with the caregiver. Securely bonded infants show distress when the caregiver departs, but can be easily soothed upon his or her return. Insecurely attached infants display two notable patterns. In one pattern the infant shows distress when the caregiver leaves, but cannot be readily soothed when the caregiver returns. In another example, the infant exhibits little, if any, signs of distress when the caregiver departs, and shows little interest when the he or she returns. Securely attached infants also show an ability to play and move about independently more so than their insecure counterparts. These attachment patterns have been termed: secure, ambivalent, and avoidant, respectively.

Depending on whether we formed secure, insecure, ambivalent, or avoidant attachment bonds with our caregivers, we subsequently adopt a positive or negative adult interpersonal stance. Our experiences in relationships with our caregivers become internalized as mental representations of the self, the other, and the self-in-relation to the other. These internalized representations function mainly on an unconscious level to shape our interpersonal attitudes and expectations. Adult interpersonal functioning is based on *internalized working models* of childhood attachment patterns (Wallin, 2007).

Meyer and Pilkonis (2002) have identified four empirically supported adult attachment styles based on early attachment patterns: *secure*, *preoccupied-ambivalent*, *dismissing-avoidance*, and *fearful-avoidance*. Secure attachment is associated with consistently nurturing caregiver attention. Secure individuals expect to be comforted and gratified by relationships and they believe that they are worthy of the comforting provided by attentive partners. They also recover better when their trust has been violated by actively seeking comfort in other relationships. Preoccupied-ambivalent attachment is associated with inconsistent caregiver attention (e.g., the child is given nurturing care at times and is neglected at other times). Preoccupied-ambivalent adults are preoccupied with anxieties and issues of trust. On the one hand, they yearn for comforting relationships but they are also fearful, especially of rejection, from prospective partners. Dismissing-avoidance attachment is linked to a caregiver style of consistent

lack of attunement and nurturance. Dismissing-avoidance individuals tend to maintain a posture of defensive distance from others and avoid committed relationships. Worst off are individuals who exhibit a fearful-avoidance style. Fearful-avoidance attachment patterns are associated with consistently neglectful and/or abusive caregivers. These individuals find it exceptionally hard to trust others. They are especially fearful of abandonment and are prone to develop symptoms of depression, including suicidal ideations, after a relationship breaks up.

Meyer and Pilkonis (2002) also examine the existing attachment style measurement instruments as well as research linking attachment styles to the formation of the therapy alliance and outcome studies. Two of the frequently used instruments are: the Adult Attachment Interview (AAI) and the Experiences in Close Relationships questionnaire (ECR). The AAI was constructed as a series of interview items covering a range of relational perspectives and attitudes and is used by analyzing the recorded narratives. The ECR is a questionnaire that inquires about adult romantic relationship histories. Examination of the relationship between attachment style measures and self-reports of the treatment alliance showed a weak convergence. The authors concluded that the different variable instruments (attachment styles and alliance measures) are not measuring equivalent constructs, meaning there is a lack of sufficient clarity about the connections between the two.

The therapy relationship is structured in a way that resembles child–caregiver roles. The therapist acts as a source of comfort, cognitive and affective bonding, and emotional regulation. It is, therefore, logical to assume that preexisting internal working models of interpersonal life and attachment styles will impact the therapy process. The authors reviewed several studies examining the relationship between attachment styles and therapeutic relationship. Cited authors examined in-patient attachment styles and outcome, attachment styles and formation of the alliance, and therapist attachment styles.

Results confirmed that patients with secure attachment styles functioned better during and after therapy, than did insecure patients. Dismissive-avoidant patients, however, showed greater relative improvement than did secure patients. Secure patients did show significant correlations with outcome than did insecure patients. The authors speculated that, despite their distancing styles, dismissive patients may have unexpectedly benefited from the prolonged connections formed with therapist during long-term psychoanalytic treatments.

Measurements of the alliance reports showed that secure patients formed stronger, more effective treatment alliances. Dismissive patients reported weaker alliance formation. Preoccupied patients reported highly positive ratings. The unexpected high ratings of the preoccupied patients was explained as resulting from the tendency of preoccupied individuals to be fearful of rejection, and thus they were anxious to please the therapist and present themselves and their treatment experiences in a positive light. Overall, more securely attached patients were able to form better therapeutic alliances, which were shown to be associated with more sustained improvements over time.

Secure attachment style therapists were more likely to handle relationship problems (i.e., therapy ruptures [see that section] more effectively than less secure therapists). Preoccupied therapists, presumably due to their fear of rejection, showed more treatment problems with difficult patients. Much of the research provides evidence that therapists do respond differently to patients depending on patient attachment styles. There was some evidence that another important therapist treatment factor was the tendency for anxious therapists to be less empathic with dismissive and fearful-avoidance patients. More research is needed to ascertain how therapists can best respond to different client attachment styles to optimize positive treatment outcomes.

5.1.1.3 Cultural Variables

The therapy relationship exists within a larger social, cultural, and political system. Cultural forces impact many aspects of the therapy relationship. The profession of psychotherapy is itself based on a culturally specific worldview. Historically, European middleclass cultural values shaped the norms and expectations for appropriate professional demeanor, dress, roles, settings, goals, rules, ethics and treatment modalities, etc. (Frew, 2008). For the most part, these same cultural values have determined mental health policies and practices throughout the country's mental health delivery system. How many African-Americans, American Indians, or Asian immigrants have served on state or county Mental Health Boards or policy-making Commissions, Managed Care Boards, etc., in any area of the country?

Culture and gender influence client help-seeking behaviors, as well as role and outcome expectations. It is unlikely that the therapy dyad will achieve enough congruence to form a successful working alliance, if cultural and gender influences are ignored or not properly incorporated into our practice. All practitioners, regardless of our own demographic backgrounds, need to be aware of our biases, including racial, gender, sexual orientation, and social class biases. Moreover, it is not ethical to attempt to deliver services to any group where our ignorance or biases toward that group will interfere with competent professional practices.

Much of the psychotherapy literature has spoken to the high dropout rates of ethnic minorities and lower SES clients. Racial and gender matching has been one of the possible solutions that has been proposed over the years. Indeed, several studies have shown that race and gender matching does have a positive effect on retention rates. Therapists and clients matched by culture, ethnicity, and gender tend to report higher numbers of therapy sessions. On the whole, there is evidence that female to female therapist–client matches do produce stronger alliance scores. Sue and Lam (2002) perused the outcome literature and found evidence that lesbian, gay, and bisexual clients (LBT) stated preferences for female therapists, regardless of sexual orientation of the therapist. Sue and Lam also point to the fact that there are fewer studies on SES and outcome than is true of any other demographic group, leaving little room to draw conclusions about SES therapist–client relationships, including retention rates and matching.

While better retention rates might imply a stronger alliance, therapist–client matching studies do not show evidence for higher therapeutic alliance scores. Alliance variables are inclusive of many relational aspects, such as therapist competencies and client treatment expectations, therefore, racial and gender matches may produce higher retention, but not necessarily a stronger treatment alliance.

Different cultural groups also have different perspectives on mental health than do most professional psychotherapists. This is especially true when ethnicity is confounded with lower socioeconomic status. In a study involving 25 lower class White, Black, and Puerto Rican clients, Alverson et al. (2007) found that each ethnic group was confronted with a different set of treatment alliance barriers within their treatment clinics. Using a qualitative research method, clients were interviewed within their own cultural neighborhood settings, regarding their mental health point of view (how they defined their illness) and their treatment service experiences.

White clients were the most self-disclosing, were more likely to talk about their feelings, and perceived their mental health problems in biomedical terms. Alliance barriers for White clients included therapists not listening to their stories and not giving them adequate encouragement.

Black clients were more inclined to feel stigmatized by mental illness and needed more privacy. Black clients felt systematically jeopardized by being assigned to group therapy with strangers, not including family members in their treatment and not being given adequate information about medications. Puerto Rican clients tended to believe that the origins of mental illnesses were biological or brought on by social and environmental causes. Puerto Ricans took special comfort in family ties and felt particularly disadvantaged if their families were omitted from the treatment process (Alverson et al., 2007).

Other authors have pointed out that cultural groups differ in their view of the proper role expectations for the psychotherapist. Some groups prefer the therapist to take a formal, highly structured, authority figure stance and can be disturbed, confused, or insulted by a therapist who assumes a casual, egalitarian position. Generally speaking, Asian and Hispanic groups tend to fall within this role preference norm. Yet other groups are especially put off by the expert, authority figure posture and feel "talked down to" by a dominating figure that may be perceived as threatening and demeaning. These cultures tend to feel especially vulnerable and cautious with therapists who cannot, or will not, connect on a more personal level and may experience "coldness" or distancing that negates forming a strong alliance.

Therapists must recognize these clients' cultural preferences and be prepared to be more open and assume an equal client–therapist stance (Vasquez, 2007).

Recognizing and admitting to our biases can be difficult. Most likely we have all been taught or exposed to biased thinking, values, and attitudes, but are not necessarily conscious of this fact. Several researchers have focused on the largely unconscious nature of racial bias. These studies have shown that while we harbor racially biased attitudes, we often feel ashamed to admit it, thus, Dovidio and Gaertner (2008) coined the term *aversive racism* to address racist cognitions operating outside of our awareness.

Biases in the therapy relationship can be expressed by the therapist's inability to provide adequate empathy, validation, and support for the client's painful racial, sexual orientation, social class, or gender experiences in a society where he or she can be exposed to hostilities and discrimination. Lack of empathy, lack of validation, or denial of the realities of discrimination is a behavior that has been termed *micro-aggressions*. A study by Constantine (2007) showed that counselor racial micro-aggressions explained 15% of the variance of failures in the therapeutic alliance. Well-meaning therapists can be guilty of displaying (including nonverbally) micro-aggression attitudes such as *color blindness* or *blaming the victim*, which amount to denial of real situations of racial bias and their painful consequences.

Unfortunately, alliance barrier difficulties may not be addressed properly in therapy situations where culture, gender, and sexual orientation conflicts exist. There is evidence that clients may not feel comfortable confronting bias when evident in the therapist's attitudes. By definition, the therapist is in a superior role and power position and clients may not want to risk offending them. Nor is it easy for clients who may have histories of abandonment, child abuse, rejection, or social/political discrimination to risk making the therapist angry. Thus, many tend to keep their concerns to themselves and instead withdraw, passively resist, or drop out of the therapy (Constantine, 2007; Vasquez, 2007).

More importantly, clients are often not alone in having difficulties confronting or addressing diversity conflicts. After many years of teaching diversity courses in three graduate schools, it is clear to me that many students have real hesitation in talking about diversity issues. Many White students feel particularly at risk talking openly about racial matters, either in class or with their ethnic minority clients. White students have often expressed concerns that they will

be viewed as racists, if they unknowingly say "something offensive." Some White students have reported that they prefer to avoid racial and social class topics because thinking about these topics can provoke uncomfortable feelings of guilt or shame.

Others have reported that they were taught to avoid many diversity topics, regarding them as "taboo" or off-limits, at least in public or professional settings. Still others were raised to believe that the proper nonracist, "politically correct" attitudes were positions of "color blindness," where a person's race (or gender) should not mean anything and that everyone should only be viewed as individuals. Unfortunately, many crucial diversity topics are believed to be too "sensitive" or too prone to cause unpleasant interpersonal conflicts and altercations and are, therefore, simply not "safe" to approach and it is smart to avoid them. These beliefs and perspectives collide with openly and deliberately addressing diversity issues in the therapy process because previous learning has taught students that to do so would be inappropriate, "risky," "painful," or "unprofessional." Obviously, these attitudes will have lasting impact on any therapy situation. The therapy process will be at best seriously limited, or worse, the process will inevitably stall or come to a premature halt.

Perhaps the most difficult thing for any therapist is to examine how our own demographic realities affect our practice. How am I affected as a person, and subsequently as a professional, by my ethnicity, gender, age, sexual orientation, social class, religious beliefs, lifestyle choices, etc.? It is not likely, as much as I might want to think so, that these personal, social, and political statuses have no effect on how I relate to my clients and how I perceive and evaluate their problems and behaviors. This is a professional issue that goes beyond bias; it is a matter of worldview and how we are each shaped by how we were taught to see the world and see ourselves in the world. Moreover, I need to recognize what I was taught. More importantly, we all operate, consciously or not, from a set of learned values that are integral to our worldview and lifestyles. What are my values? What life choices do I systematically validate and endorse (Pedersen, Crethar, & Carlson, 2008)?

It is also a matter of knowledge or ignorance about the worldview of our clients. How much time have I actually spent with people who are different from me (i.e., persons from a different race, sexual orientation, or social class)? How does my ignorance or lack of familiarity affect my work with a client from a social background that is foreign to me? Why am I so ignorant about certain groups in the first place? Is my ignorance a form of micro-aggression, that is, I consciously or unconsciously avoid educating myself about different social groups in order to maintain a social/political distance from them?

It can be quite amazing how many well-educated people maintain ignorance about the different social groups in our communities. A few years ago, I was assigned to supervise an intern in our training clinic. One day she reported that one of her clients was Jewish. I asked her how often and in what ways the client had commented on this fact. Her answer indicated that the client's Jewish ethnicity was centrally important to her identity and worldview. I then asked the intern how much she knew about Jewish beliefs, traditions and history, and she replied that she knew almost nothing. I then instructed her to get to a library and check out books on Jewish history and traditions and begin reading up on the subject before her next meeting with her client. The intern stated that she would do this, but was puzzled about why that was necessary. I then informed her that she was currently practicing in an unethical manner to provide treatment to a client about whom she knew very little and could not, therefore, offer competent psychotherapy services. I also wondered why her ignorance about her client was so acceptable to her. Was she distancing herself from her client in other, perhaps more meaningful ways?

I made a mental note to myself to observe her videotapes more carefully for signs of lack of empathy and, indeed, that was what I found. Consequently, I altered my work with this intern toward helping her become more aware of relational issues in her therapy work.

The best solutions for diversity problems in therapy, put forth so clearly by Vasquez (2007), is for every therapist to take his or her responsibility seriously for greater self-awareness, openness to identifying and refuting his or her biases, learn the appropriate evidence-based treatments for different groups, and prepare themselves to include these topics in their discussions with the clients. We need to be capable of appropriate empathic responses and, moreover, we need to be willing to advocate for social change that will eliminate discrimination in all of its forms. It should be recognized that failing to take these steps leaves us at risk for being unethical, as well as ineffective practitioners.

5.1.1.4 Theoretical Orientations: Theoretical Orientations and Definitions of the Alliance

Different theoretical orientations have approached conceptualization of the therapy relationship differently. That said, it is important to note that the most practicing clinicians of any theoretical persuasion would agree that the alliance is essential for forming a collaborative and effective treatment. Generally, diverse orientations differ in two ways. First, there are different views as to the extent of the emphasis placed on the role of relationship in application of treatment methods and techniques. Second, there are variations in the manner in which the therapist is expected to respond to the relational material presented in the treatment dyad. In other words, how does the theory define and utilize the alliance in each treatment model, and in what prescribed manner does the therapist incorporate the alliance into his or her intervention strategies and techniques?

5.1.2   Psychodynamic Relational Treatment Strategies

Relational components have featured fundamentally throughout various psychodynamic treatments, especially in *psychoanalysis* and the more contemporary models. Freud posited *transference* as the key defense mechanism through which clients attributed their unconscious relational perceptions about significant others, especially parents, onto the therapist. By relating to the therapist in this way clients revealed their deeper feelings, anxieties, needs and wishes concerning parents and the relational dynamics associated with the parent–child relationship. Problems originating from early parent–child relationships are likely to become entrenched into painful and self-defeating interpersonal patterns, or *repetition compulsions*, where a set of rigid thoughts, feelings, attitudes, and behaviors persist throughout a wide range of social encounters and situations, making it hard for individuals to find lasting satisfaction in adult life (Goldman & Anderson, 2007).

The client's unconscious interpersonal problems usually gain expression when the client experiences *negative transference*, where feelings of hostility and anxiety are projected onto the therapist. For example, the therapist is perceived by the client as a "cold," "hostile," or "rejecting" person who should not to be trusted. Clients express these negative projections in all manner of ways (e.g., they might withdraw, accuse, attack, or become evasive, etc.).

By identifying, confronting, and interpreting the transference, the therapist engages with the client to bring to light hidden problems relating appropriately to authority figures and other significant persons. Unresolved interpersonal difficulties especially those concerning issues of trust, power, sexual gratification, self-esteem and intimacy needs, etc., can be brought to light within the therapy context, so that the client comes to understand the real origins and nature of his or her difficulties. This process of opening the unconscious to conscious awareness is called *insight*, which is the main goal of psychodynamic therapies. Insight eventually allows the client to resolve his or her unconscious compulsion to repeat painful and traumatizing childhood relational experiences, allowing for successful development toward mature adult functioning (Meissener, 2006).

Countertransference is the therapist counterpart to the client's transference. Countertransference refers to the cognitions and emotions that the therapist experiences in relation to the client. Feelings of affection, anxiety, inadequacy, excitement, praise, rejection, anger, frustration, etc. are all considered to be possible projections on the part of the therapist onto the client. In classical theory, countertransference is seen as a possible hindrance to the therapist's ability to function properly. When challenged by the client's negative transference, the therapist's first job is to remain objective. The proscribed therapist stance is one of removed distance to allow the client, as much as possible, to project onto a "blank screen." That is, therapists deliberately keep their own personal responses in check so that the client can fully express and explore his or her transference-inspired emotions and reactions without the interfering effects of the countertransference. In this way, it is possible to rely on the transference as an accurate source of information about the client's relationship history.

Thinking about both transference and countertransference has been modified over time. In contemporary schools of psychodynamic thought, such as *object relations* and *intersubjective* approaches, the relationship takes on a central role in the treatment modality. Transference and countertransference are both utilized in a more direct and integrated way than in classical, traditional methods. The countertransference is viewed as a valuable and intricate tool to be used as both a source of information and a part of intervention techniques. The relationship (i.e., the cognitive and affective responses of both parties to one another) is a crucial element in the analysis (Bollas, 1987; Ogden, 1993; St. Clair, 2004).

The client's transference is viewed as an unconscious attempt to join with the therapist in an *enactment* or repetition of the traumatizing or frustrating interpersonal relationship patterns and themes. It is assumed that the therapist's cognitive and affective responses (countertransference) to the client are in counterpart with the client's affective experiences. The therapist must try to be fully aware or make the best attempt at full awareness of his or her own authentic experiencing of the client's affects and behaviors. He or she needs to be aware of his or her own affective responses such as anger, hurt, anxiety, despair, frustration, etc. as possible clues to the client's internal affective and relational world. Once the therapist becomes awarene, he or she then responds to the client in a spontaneous and genuine here-now *engagement* that is designed to bring to light the unconscious relational meanings imbedded in the enactment (Ehrenberg, 1992; Mitchell, 1988).

5.1.3   Humanist Relational Treatment Strategies

Humanist therapists rely on a firm belief in the ultimate goodness of most human beings. Human beings are all born with the capacity to mature and function in ways that promote

happy, healthy, individuals contributing in positive ways to their society. Interpersonal problems begin when we are denied the proper caretaking, cherishing, and permission to become our natural true selves. Our natural relational development is then distorted and sacrificed to adjust and accommodate to destructive environments. A major sacrifice is the loss of authenticity and awareness about the realities of our true perceptions about us and others. Instead, we learn to suppress our true feelings, needs, and personal goals (Frew, 2008).

As articulated by Rogers (1961), humanist therapies focus on a *phenomenological* perspective, that is, the focus is on the development of human consciousness and awareness as it unfolds in the therapy relationship. The treatment emphasis is on increasing connections between therapist and client, in order to heighten awareness of here-now realities of the client's experience. The therapist concentrates on creating a relationship that nurtures and encourages each client's unique experience and perspective to find full awareness and expression. The curative aspects of this relational environment consist of assisting the clients to increase their connectedness to previously unknown aspects of themselves (cognitions and affects) and decrease the emotional and cognitive distance between themselves and the therapist.

The humanist perspective posits that certain therapist values and attitudes are prerequisite to a positive treatment outcome. First, the therapists must be as open as possible to the experience of both themselves and the client. *Openness to awareness* of the self and the other is a primary stance that opens the therapist to the next requisite attitude (i.e., *understanding*). The therapist strives to understand the clients' unique *personhood* with their own individual strengths, values, needs, goals, weaknesses, attributes, etc. Given this position of respect for understanding, and striving to understand, the client's uniqueness, the therapist necessarily assumes an attitude of *acceptance*. The client is accepted, as completely as possible, as the human being he or she is, with no presumption on the therapist's part about imposing his or her own values, desires, and goals onto the client. Put another way, the therapist does not presume to direct the client's growth, goals, or purposes (Ramsay et al., 2005; Frew, 2008).

The techniques employed are intended to increase awareness and bring to consciousness relational realities revealed within the therapy process. A major tool used to accomplish this goal is *empathy*. Therapists' active empathic responses are a cornerstone in aiding the clients to become increasingly aware of their true feelings and thoughts. Empathy encourages trust but, moreover, it establishes the therapy relationship as a vehicle for trust, acceptance, and understanding.

Another set of indispensable humanist attitudes is *warmth and compassion*. The therapist must have the capacity to feel compassion for the client's painful cognitions and affects. Compassion allows the clients to feel a sense of safety and *positive regard* that encourages opening their most vulnerable experiences and feelings to the therapy process. Finally, but perhaps most important, the therapist must be *genuine*. If the therapist is not honest and open about his or her own experience, the client can hardly trust in the process. It should also be noted that sound and prudent judgments are called for to preserve the therapeutic focus and insure that an atmosphere of mutual respect is maintained. Therefore, self-disclosures on the part of the therapist must be consistent with appropriate clinical roles and purposes.

Client-centered therapists challenge themselves and their clients to explore as fully and as honestly as possible the feelings and cognitions that are present in the moment-to-moment experience of the treatment context. The therapist maintains self-awareness, genuine and appropriate self-disclosures, and strives to accept, empathize with, and understand the client.

It is also important that the therapist maintains an attitude of acceptance of the feelings being expressed, without the intrusion of inhibiting value judgments. There are no "bad" or "wrong" feelings, only bad or wrong behaviors. It is extremely important that the therapist believes this, rather than attempt to encourage or collude with the client to censure or suppress feelings that he or she has been taught to fear or deny. As the client experiences the therapist's active empathy a sense of being understood and validated replaces feelings of loneliness and despair. As the client experiences the therapist offering empathy and understanding, the client begins to listen more accurately to themselves and connect to suppressed feelings and experiences. In a growth fostering, freeing, and validating relationship, clients tend to move toward greater awareness and better functioning (Rogers, 1961; Frew, 2008).

5.1.4   Cognitive-Behavioral Relational Treatment Strategies

Historically behavior therapy (BT) and cognitive-behavior therapy (CBT) models rejected concepts of unconscious motives as having anything to do with explaining observable behaviors. Instead what was embraced was the position that behaviors are motivated by environmental consequences that reinforce or increase the likelihood that particular behaviors will be repeated or maintained. Behavior change required the therapist to teach the clients to change the reinforcing cognitions and behaviors and their behavioral consequences and thus, change their unwanted *target behaviors*.

It was also noted, however, that clients tended to do better if they engaged in all aspects of the treatment (e.g., came to sessions regularly and diligently completed all homework assignments). In this respect, the importance of the therapy alliance was seen as a "necessary, but not sufficient," component of the change process (Hardy et al., 2007). While it was not clear that therapist behaviors such as empathy, positive regard, compassion, and understanding had any empirically supported impact on therapeutic outcomes, it was assumed that these skills needed to be included in the therapist's repertoire in order to support the alliance. Relationship building skills, however, were not emphasized in BT and CBT training and treatment, because they were considered "micro-skills" and were left to introductory basic skills courses. As research showing the high correlations between the therapy alliance and treatment outcomes has continued to accumulate, BT and CBT treatment models have begun to change. Indeed, Hardy et al. concluded that empathy accounted for 7–10% of the variance of cognitive-behavioral treatment (CBT) outcomes and that empathy was more essential for successful CBT outcomes than any other treatment model, although the reasons for this were unclear.

In the early 1990s Kohlenberg and Tsai (1991) developed *functional analytic psychotherapy* (FAP), a CBT treatment that emphasizes the relational aspects of therapy. Taking note of the potential therapeutic benefits of what psychodynamic theorists called *transference*, Kohlenberg argued that the client's here-now responses to the therapy process and the therapist were useful in correcting maladaptive cognitions. In-session cognitions termed *clinically relevant behavior* (CRBs) are useful in helping clients become aware of their here-now cognitions in interpersonal situations. In the FAP-enhanced CBT approach or *FECT* the clients learn to be aware of their CRBs and to notice how these cognitions are occurring throughout different interpersonal situations and how CRBs may be reinforcing their negative interpersonal behavioral consequences.

In FECT, the therapist must first be aware of his or her own emotional responses to the client's in-session behaviors as clues to maladaptive cognitions (*internal behaviors*) leading to maladaptive external behaviors (CRBs). Next, the therapist distinguishes between in-session behaviors that are the source of problems (CBR1s) and confronts those using CBT cognitive techniques. The therapist then interprets other interpersonal problems in the client's life as stemming from, and similar to, the in-session CBR1s. As the clients learn to recognize their CBR1s and how they occur within the therapy, the therapist then notices and reinforces in-session behaviors that represent improved functioning (*CBR2s*). FECT uses the therapy relationship as an in vivo learning tool. The combination of refuting CBR1s and reinforcing CBR2s eventually enhances the therapy bond and helps the clients learn better interpersonal functioning throughout their relationships (Kohlenberg, Kanter, Bolling, Parker, & Tsai, 2002).

5.1.5 Relationship Congruence

As in any relationship, the therapy process unfolds in a developmental sequence of stages and phases from the beginning to the middle and, eventually, the endpoint. In the beginning phase each participant brings his or her own set of preconceived notions and expectations as to how the relationship should be conducted in order to realize desired relationship roles, goals, and outcomes (Patterson, Uhlin, & Anderson, 2008). Relationship *congruence* makes the relationship "feel right" to both parties. Prescribed roles and how they are played are a major aspect of relationship *role congruence*. Each role has its own *demand characteristics*. The therapist has a set of role requirements and so does the client. In order for the therapist to do his or her "job," the client must fit with a set of client-role demands. On the other end, if the client is to get his or her role needs met the therapist must fit with a set of therapist-role demands. In a *congruent* relationship, the demand characteristics are met by both individuals (Lichtenberg et al., 1998).

The beginning or opening interactions are characterized by a series of participant maneuvers designed to influence the other toward behaviors that satisfy or fit with each participant's particular set of individual expectations, hopes, and desires. Put another way, each attempts to control the process of defining and determining the nature of the relationship. A negotiation unfolds as each tries to assume control over the situation. In any relationship, negotiations can be complex or relatively simple, subtle or straightforward, quickly resolved or protracted. Issues of power and control are conveyed by the therapist in how they articulate the therapy structure (e.g., the session appointments, fee structure, therapy work expectations, etc.). The clients convey their expectations in terms of how they present their history, complaints, problems, symptoms, and relational requirements.

The goal of the negotiation is to achieve congruence with each other. Participants feel satisfied with the negotiations when the relationship is defined in a way that promises satisfaction of their expectations. Therapy work cannot actually begin until relationship definitions have been successfully negotiated and an alliance formed. If relationship congruence is achieved, the participants can proceed with the establishment of a gratifying collaborative alliance. They will probably be successful in agreeing on mutually satisfying ways of working together (e.g., reach agreement on treatment goals, role expectations, and methods for eventually achieving desired outcomes).

When there is no fit, or a poor fit, or where there are primary disagreements, the relationship will become *incongruent* and will be experienced as frustrating, daunting, threatening,

or unsatisfactory by both participants (Lichtenberg et al., 1998). Mutual frustrations may motivate both to continue the negotiation process hoping for congruence at some point. If further negotiations fail to result in conciliation, it is likely that the relationship will stall or dissolve.

In my clinical experience, clients often start the negotiations over the phone, asking questions, or perhaps, refusing to answer my questions. The indicators of relationship congruence or incongruence are quite recognizable in the first phone conversation. In some situations, I determine when it is best to refer the potential client and never agree to see them. Once the client has entered my office, however, we are on "my turf" and I usually expect to take the lead in opening the more formal, structural negotiations. I begin to assume control by setting the frame (e.g., informing the client about my practice structure, such as fees, and asking them to fill out and sign forms and take psychometric tests, etc.). It is particularly noteworthy if a client does not allow me to make all of the opening moves in our negotiations, but instead, insists on taking control by continuously talking, refusing to fill out forms, or take tests, etc.

One important aspect of relationship definition and congruence is the establishment and maintenance of proper role *boundaries*. In all role demand situations, the professional practitioner must maintain the proper role congruence, including when interfacing with the larger community or ecosystems. No therapy relationship has ever operated in a vacuum. Ecosystems operating within the therapy relationship include third-party payers, psychiatric referrals, legal constraints on confidentiality, research projects, student training and supervision, and procedural policies inherent within professional settings (e.g., community agencies, hospitals, etc.). In any of these situations the practitioner must consider role demands such as smaintaining confidentiality, or to what extent outside intrusion is warranted or necessary (McWilliams, 2004).

Whenever relationship incongruence is ignored or is allowed to persist, satisfying professional goals becomes difficult and successful outcomes are jeopardized. In some circumstances, for a variety of reasons, the therapist is unable to adequately fulfill his or her role demands and relationship incongruence becomes the norm in the relationship. When clients assume too much control over the interactions, the role demands of both the therapist and client can be seriously compromised. Under those circumstances, the participants cannot fulfill their role obligations and the therapy will likely go astray. Such is the case whenever boundary violations of all sorts (e.g., inappropriate needs, including sexual desires) are allowed to erode the therapy process (Reamer, 2001).

5.1.6 Alliance Ruptures

Much attention has been paid to recognizing, repairing, and working with ruptures in the therapy relationship. Traditionally, any behavior on the part of the client that hindered or disrupted the therapy process was thought of as *resistance*. Clients who did not cooperate with therapist interventions, or who refused to accept the therapist's interpretations, were deemed to be at odds with, or obstructing, the helping relationship that they had sought out in the first place. Such seemingly paradoxical client behavior led to much frustrated speculation as to why clients tended to behave that way. Many therapists have been trained to persuade clients to a more cooperative stance or, failing in this attempt, to end the therapy. From a relational point of view, it becomes possible to strive to understand and engage with such behaviors rather than

seek to overcome them. Interpreted from a relational framework, resistance behaviors are viewed as another form of expressing some meaningful interpersonal problem (Stark, 1994).

All relationships, no exceptions, will have some conflict inherent within them. Quite simply, no two people will always see eye to eye and to think so is naive, if not ludicrous. *Ruptures* refer to any conflicts, barriers, and impediments occurring within the therapy process. When conflicts occur in the therapy, relationship problems can develop in the treatment work itself. Therefore, the therapist needs to be prepared to address these conflicts as they arise. Ruptures occurring early in the therapy relationship can lead to premature dropping out, difficulty setting and sticking to goals, vital information kept from the therapist, and so forth and so on. Ruptures occurring later in the process can lead to missed sessions, coming late to sessions, ending sessions early, or not paying the fee, etc. (Safran & Muran, 2000).

Many therapists have experienced unexpected shifts and changes in the therapy work. How many of us have thought the therapy work was proceeding well only to have the client hint, or indeed state, that he or she did not feel anything positive was happening, or express some disappointment with the rate of progress? Or the client who makes it clear that he or she doubts that we have the competence to help them. Or the client who begins to miss or skip sessions, or simply "no shows" for no apparent reason? Or the clients who for some dubious, "out of the blue" reason decide they want to severely cut back on the number of sessions (e.g., they only want to come twice or once a month).

These are fairly obvious signs of some relationship breach that should make us wonder if we are on the same wave length with that client. Many other, not so obvious, client behaviors can be taken as signs of relationship ruptures. Clients who will not talk about important or substantive material, clients who expect the therapist to play a directive/responsible role while they assume a passive/helpless stance, clients who lose the train of thought, or quickly change the topic from some important thought or feeling, or clients who are too confused or too ambivalent to adequately address some important problem, etc.

Prolonged trends in these behaviors will ultimately frustrate both to the point of ending the therapy or stall out the process into what is called a therapeutic *impasse*, meaning that progressive movement toward a successful outcome has essentially ground to a halt. When the process is "stuck" in an impasse, the situation can be likened to a marriage that has become mired down in bickering, with neither side winning nor losing, but each continuing through an endless series of stalemates. Therapy session content tends to repeat itself and take on a déjà vu quality (e.g., "haven't we been here before," "why can't we move on from this," "will we ever resolve this problem and move on?"). Therapists and clients both eventually feel a sense of pessimistic defeatism as they each spin around the same process/content territory over and over (Mitchell, 1997; Bromberg, 1998).

Once I had a client who habitually had some, beyond his control, circumstantial difficulty or crisis arise at regular intervals in the therapy process. After two or three successive sessions, he would call and report that he could not make it in because his car was not working, or he had to leave town to take care of his mother, or his ex-wife called and could not find a baby sitter so he had to cancel to take care of his child, or something had come up at work, or he had a sore throat and had to stay in bed, etc. He was always very apologetic, worried that I would become impatient, hoped I would understand and then he would promise to see me next week and then the whole thing would begin again. Eventually, this predictable pattern became frustrating and tiresome. Obviously, we could never achieve sustained momentum toward therapeutic change, if this kept up.

In a classical model the questions would be how to confront or interpret the resistance or the negative transference, to bring the client to insight or to at least stabilize him into the process in some consistent fashion. In a relational model the questions become quite different. "What is he trying to tell me and why is he trying to tell me about it in the context of our therapy relationship?" "What is it that he experiences and do I 'get it'?" "Why is there no other way to convey it, or is this behavior the best way he can convey it?"

Relationship conflicts originate with early interactions with significant others. The goal is to better understand the relational realities motivating the interpersonal transactions expressed in the therapy context. Learning to recognize and effectively utilize the relational meanings expressed in ruptures and impasses is one of the crucial relationship skills that a therapist has at his or her disposal.

5.1.7   Focus of Analysis (You, Me, or We)

As the therapist formulates an intervention usually he or she analyses the client content (what the client has spoken about) first and then focuses the intervention on the client (i.e., he or she comments on, or interprets the client's affective, cognitive, or behavioral messages). This type of intervention is at the *one person or you* level of analysis. Classical psychodynamic therapy was developed as mainly a *one person – you* level of analysis focused on the client's transference responses to the therapist. Another level of intervention is when the therapists focus their analysis on themselves (i.e., analyzing their own affect, cognitions, or behaviors). The therapists might then decide to include their awareness of their own experience as part of the intervention. This type of intervention is at the *one person or me* level of analysis. In classical models, the *one person – me* level is focused on the *countertransference* responses of the therapist. When the therapy intervention combines both levels, the intervention is then focused at the *two people or we* level of analysis.

Drawing on developments in attachment theory, psychodynamic models began to change toward thinking of the therapy relationship and the attachment bonds created between clients and therapists as the means for therapeutic change. In the same way, the client creates a view of the therapist based on transference, so does the therapist have his or her own relationship history activated in countertransference responses to the client. As times have changed, contemporary psychodynamic therapy has shifted the focus to an *intersubjective* framework or the *two people-we* level of intervention (Stark, 1999; Safran & Muran, 2000).

Mitchell (1988) used the phrase *relational matrix* referring to the intersubjective concept of the confluence of the self, the other, and the transactional patterns between the two. The relational matrix is largely unconscious and built upon internal representations of others, or *objects*, and our experiences of objects from our relational past. In the intersubjective model it is assumed that our behavior is largely motivated and determined by the dynamic between the interconnections that we form with others. Analysis of these relational matrixes and the interactions through which they find expression become the main focus of therapeutic interventions in two-person models.

Any interactions taking place in the therapy context are the cocreations of the subjective experiences of both the client and the therapist creating a moment-to-moment dynamic. Clarifications, confrontations, and interpretations are aimed at the relational intersection between the client and the therapist, not just at the client. Examination of the interactions

themselves leads to identification of interpersonal patterns that clarify the deeper issues, goals, and motivations for the client's behaviors in and out of the therapy context (Ehrenberg, 1992; Bromberg, 1998; Stark, 1999).

5.2   Basic Competencies of the Clinician

The basic competencies required to develop a strong therapy alliance are the same set of skills necessary to develop any healthy, constructive relationship. Basic skills promote formation of the professional relationship that is capable of providing the conduit for therapeutic change. All of the "basic" skills are actually a complex array of behaviors that can be, at times, daunting to apply and may take years of practice to master. After many years of practice, it is clear to me that many of our clients have never experienced the growth-enhancing benefits of a healthy intimate relationship, predicated on mutual trust and respect, and honest sharing of perspectives, feelings, and needs. The literature and my own clinical experience support the following list of basic skills: self-awareness, empathy, genuineness, maintenance of relationship congruence, and appropriate interventions for different attachment styles. Professional training must equip practitioners to engage with clients on many levels of awareness and responding.

This section (and the next section) will offer case examples from my own practice experiences. The chosen clients represent some commonly encountered relational challenges. Many clients present relationship problems stemming from attachment styles developed in childhood. Examples of working with clients exhibiting preoccupied-ambivalent, dismissive-avoidance and fearful-avoidance styles will be offered to demonstrate some interventions that have proven useful in forming the right relationship connections.

The therapist must be constantly aware of his or her own moment-to-moment cognitive and affective responses and experiences. This may be harder to do than it would seem, especially when we experience negative feelings for our clients. Allowing ourselves to be fully aware of strong negative, or positive, feelings for clients can be a threatening experience for some therapists. Many therapists are trained that strong emotions are a potential threat to maintaining objectivity and proper boundaries. This is unfortunate, since emotional responses and reactions are normal aspects of any relationship. Normal human emotions cannot be eradicated but can only be suppressed, manipulated, or distorted, and none of these options leads to healthy relational functioning. For some therapists exerting control over their own emotions is substituted by attempting to control the emotions of the client (i.e., avoidance of threatening affects as a mutual collusion).

For example, I recently received a phone call from a student in our clinic. She was obviously upset after a recent encounter with a male client. During their session, he had strongly stated that he was romantically and sexually attracted to her. As a student in her first year of graduate training, she felt completely unprepared for this behavior and dissolved into a state of confusion and intense anxiety. When I asked her to recount her feelings during this episode, she was unable to do so and could only repeat her concern that she had "handled the situation right." I pointed out that apparently she had become so anxiety-ridden during this encounter that she had dissociated from her emotional reactions and that was not helpful to her or her client. By becoming panic-stricken about how to "handle it," she had missed vitally important information that her emotions could have provided. For one thing, the client obviously knew that she was a novice therapist and might not, therefore, be adequately experienced or prepared to

effectively "handle it." This behavior on his part suggested issues of narcissistic power needs and, on a deeper level, issues of hostility and safety regarding relationships. After explaining this possible interpretation of his behavior, she was able to access feelings of fear and anger that his behavior had provoked, and began to see the therapeutic importance of staying attuned to her emotions.

Combinations of active empathic listening and genuine responding are basic tools in any therapy relationship. The capacity to attune to, and comprehend, the feelings of the other person is the fastest route to establishing a trusting bond in the therapy environment. Empathy requires listening to the affective parts of the client's verbal statements as well as paying attention to accompanying nonverbal affective messages. When the therapist responds he or she makes some statement that corresponds to the client's feelings, thereby letting the client know that his or her feelings were heard and understood.

As the clients experience empathy and acceptance they can explore and connect to previously unknown or unacceptable aspects of the self. They begin to feel less alone, less alienated, less confused, and less self-doubting. They begin to feel, perhaps for the first time, a sense of connection, clarity, and improved self-esteem. They begin to make different and better decisions and judgments in a variety of situations with a fresh sense of confidence and trust in themselves. They feel stronger in their ability to take control of life choices and situations.

A female client (preoccupied-ambivalent style), approaching middle age, had achieved a great deal in her career. Yet, she was filled with anxiety and sometimes dread when she was confronted with anger or antagonism from coworkers, many of whom she supervised. She also suffered from depression and severe self-doubt. Despite all that she had achieved, she was not sure that she was good enough, smart enough, or wise enough to deal with interpersonal altercations. She was always afraid that she would "be the one who is wrong" and get blamed for causing a problem. After several months of therapy, and much emphasis placed on empathic responding to her feelings, she began to see things differently.

As she recounted stories of clashes with coworkers, I responded empathically to her feelings of anger, sadness, fear, shame, loss, etc. Eventually she experienced being known and understood and she felt less like a peculiar and unknowable pariah, a feeling she had endured since adolescence, growing up in an emotionally abusive family that moved around the country a great deal. She now began to feel that her thoughts, feelings, and desires had some validity and normalcy. One day, she talked about how she was planning to handle a particularly sensitive power struggle with a hostile coworker. She outlined how she would assert herself with the worker and if that did not succeed she was ready to ask her to resign. When I commented that her plan seemed well thought-out and appropriate, she said: "You know, I always knew that I was smart, but I was afraid to be smart, but now I'm ready to be *deliberately* smart, does that make sense?" I assured her it did indeed make sense.

The therapist must also be willing and able to respond in genuine and authentic ways to any interaction with a client. This can also be difficult at times. Honest and open responses can indeed be risky in any relationship, and many therapists worry that they will inadvertently be "too blunt" or straightforward in a manner that will cause irreparable harm and damage to their clients. Yet, without the firm shared knowledge that we are capable of genuine responses, it is impossible to establish any lasting trust. Trust is so essential to the development of a healthy, thriving relationship that it is difficult to imagine a successful therapy outcome without it. At times it becomes absolutely essential to establish trust, safety, and respect with regressive clients who challenge and threaten reasonable rules of civility and courtesy.

A young female client (fearful-avoidance style) who was struggling with childhood sexual trauma became quite agitated during one of our sessions, as she recalled the devastation of past abuse situations. At one point, she became so enraged that she got up from her chair and threatened to "destroy this office and everything in it." It did not feel like an idle threat or gesture; she appeared to be on the verge of actually breaking something. I realized that this situation called for a suitably honest and genuine response that would have the effect of establishing me as someone who could be trusted and respected and at the same time assert the rules of our relationship congruence. It also seemed obvious to me that this behavior was meant to be provoking and I was being "tested" to see how I would respond.

It was working. I became aware of a sense of violation and feelings of anger. I very quickly stated: "You will not harm anything in my office, nor will you even threaten to, or you will leave and never come back." She promptly stopped her threats and studied me carefully for a while. Then she said in a sincere voice, "I'm sorry, I won't do that again," returned to her seat and resumed the session with an appropriate and nonmenacing demeanor. Four years of therapy produced good results, but it would not have been possible if the relationship had not been carefully protected from the corrosive effects of destructive enactments.

The practitioner must always consider the question of "who is in charge," who is defining the relationship, and is the relationship consistent with the roles we are assigned? Clients usually expect that our greater expertise and experience dealing with life problems will equip us to take charge of the therapy work, in whatever manner is culturally appropriate and mutually respectful. Clients also tend to join with the therapy better if they are also responsible for the successful outcome of the process. While relationship congruence is a cocreation, maintenance of role congruence is principally the responsibility of the therapist. For instance, it is not in keeping with the proper role relationships to engage in social, economic, or political roles with our clients. I also avoid giving advice about personal lifestyle choices, relationship commitments, financial problems, medical problems, legal problems, etc. I try to remain completely free of any roles with clients other than "therapist."

One of my clients (preoccupied-ambivalent style) was a student who was struggling with what to do with himself once he graduated. Toward the end of the treatment, which had gone very well, he continually asked me for ideas about possible future career paths. I resisted offering him any advice. Instead I repeated my stance (i.e., "all I do is therapy"). He became quite anxious and agitated at times and doubted he would make the right choices for himself. When he became agitated, I would reassure him that I thought he was a very bright young man and would be successful at any number of possible careers, and the only thing that mattered to me was his future happiness with whatever he chose.

Regardless of what I said, he persisted. He was obviously, with some desperation, trying to renegotiate the rules and roles of our relationship. Our relationship was no longer congruent. I was receiving weekly messages from him that he felt frustrated and disappointed by my refusal to offer him what he needed from me. I began to wonder about the rightness of my position. Was I being too rigid? Was I overly strict in my role boundary definitions? What would it hurt if I gave him "a few suggestions?" Despite the evidence to the contrary, had the treatment actually failed?

Yet, something else nagged at me. I realized that I did not want the responsibility for providing him with help to select a career. I worried about his lack of belief in himself. I also did not feel good about his lack of imagination or his lack of faith in a process that can clearly take some time to bring to fruition. I decided to take seriously that he needed some helpful guidance

and suggestions from me, but I also needed to be true to my own beliefs about my proper role. I decided it was best to try and serve both interests.

The next session brought more of the same persistent pleas for "just a few ideas, because he was graduating soon and just wanted some idea of where to start." I answered by telling him that I did have two suggestions for him. "First, stay as open as possible and second follow your heart." I added that I was convinced that if he did those two things, in time, the right path would present itself. He responded with disappointment, "That's all?" Yes, that was all I felt I could honestly offer him, but I truly believed every word of it and hoped it would help. He was not only disappointed, but defeated. He resigned himself to the fact that I was not going to offer what he felt he needed most, so he stopped asking.

We parted amicably, he honestly appreciated the good things that had transpired and he was prepared to accept that he could not have everything he had hoped for (i.e., helpful career ideas). I did feel some concern that I had ultimately let him down and I was certain he knew this as he tried to reassure me. A year went by when I received a phone call from him. He said, "I thought you would want to know, I found it." I was genuinely grateful and excited when I said "Yes, I would, what, what did you find?" He reported that he had spent a year worrying about what he wanted to do, but my advice to "stay as open as possible and follow his heart" had stayed in his mind. One day he was in the park with a friend walking their dogs when it hit him … animals. "I've always loved animals, my whole life I've loved animals, I want to be a vet!" It was indeed one of those life-changing "eureka" moments. He had applied to veterinary medicine school and had been accepted and was eagerly planning to begin his newly found career path.

5.3 Expert Competencies of the Clinician and Transition from Basic Competence to Expert

Basic competencies serve as the foundation for more advanced treatment work by promoting the formation of a strong treatment alliance. Once an alliance has been formed, it can be put to use by providing information and interactions that heighten the therapeutic benefits. Expert competencies include becoming culturally competent, identifying and repairing relationship ruptures and impasses, and working at the proper level of analysis (i.e., you, me, or we). Advanced relational treatment skills involve using the relationship as an integral tool in the treatment itself. In other words, the therapist treats whatever is dysfunctional in the relationship. The goal is to achieve a breakthrough from enactments, or unconscious repetitions of painful relational patterns, to an engagement where mutual, authentic sharing opens up new opportunities to experience genuine intimacy.

Many practitioners justifiably think of cultural competence as a basic skill, since it is unethical to practice without it. For relational purposes, however, the subtler implications of application require more advanced skill sets. Cultural *competency* skills, which go beyond cultural *sensitivity* skills, can be strengthened by training beyond the average one course degree requirement. Advanced competencies can be acquired through practical classes, internships, and residencies that focus on diversity training. It has been my experience that many people underestimate the difficulty of practicing at a truly competent level of cross-cultural skills.

The following case illustrates this point. An African-American male client (dismissive-avoidance style) sought treatment because he was stressed at work and experiencing a sense of

anger and resentment with his coworkers on a level that struck him as irrational and debilitating. Eventually, he became concerned that his attitudes were costing him a lot of personal happiness in life. He also had been through a string of girlfriends and always wound up thinking that the women he became involved with were lacking in their caring for him and were too insistent on commitment and marriage. Essentially, he lived the emotionally empty life of a loner. He had worked very hard to educate himself and lift himself from his working class family background. He had succeeded in becoming a successful professional in an important city agency, but found that persistent feelings of anxiety and anger were robbing him of taking pleasure in achievements and success.

When therapy began we mapped out a plan for improving his mood and his desire to start dating appropriate women. He began enthusiastically. In no time, however, it became clear that he was not inclined to follow-through on any of the planned efforts for change. An obvious relationship rupture was developing. On top of this, he was often very late to our sessions. Many times he was at least 10 min late, but 20 or even 30 min late was not that unusual. He would call if he became aware that he would be late, because something was detaining him at work, and he did have to drive a fair distance to my office through rush hour traffic, so I made an effort to be patient and accepting. It was, after all, his therapy time and we had agreed that I would not compensate him by going over the time allotted, or at least, "not much" over that time.

Despite my efforts to be patient, his constant lateness combined with his lack of follow-through began to annoy me. I also became aware that his conversation was consistently along the same themes and lines (e.g., he was angry at someone at work, he was lonely, and he felt trapped by his lack of energy to do anything about anything). We were now clearly in a relationship impasse. I became increasingly frustrated and disillusioned. Finally, I began to examine more deeply how my own responses were contributing to the ruptures and impasses.

One thing that became clear to me was that I had assumed an attitude that his lateness was probably a "cultural thing." That is, as a Black man he was inclined to be casual about time. I also assumed that he was expressing anger toward his office mates due to their subtle racist behaviors, and indeed he had pointed to some clearly racist incidents. Though none of these incidences was career threatening, I could empathize with how difficult it was to be Black in his work setting. Another thing that became apparent was that I was not sure how to help him get past his refusal to do the therapy work. That is, I had no methodology or techniques in mind that I thought would succeed in breaking us both free of these trapped, "stuck" feelings.

It was time to rethink some things. First, it occurred to me to ask myself if I thought of him as "White" not Black, or "female" not male, would I have a different feeling about his behavior? Instead of a "cultural thing," I immediately began to interpret his lateness as an expression of severe anxiety and ambivalence, for which I felt some empathy and sympathy. It did not take long to also realize that I had not considered the possibility that his anger with coworkers was not the central theme, but the enactments being conducted within the therapy relationship. Was his lateness and lack of follow-through messages about feelings of habitual relational anger, loneliness, anxieties, and inadequacies? Moreover, I began to see that I had neglected to take advantage of the opportunity to address these issues within the therapy context. Why? Was I colluding with him? Were these issues that I had some anxiety about addressing with him?

In our next session, I began to address the therapy relationship and how we had both allowed our work to become stagnant and stymied by inconsistent follow-through and a

reticence to address our feelings about our work with each other. He was genuinely surprised and taken aback by these comments, but he also seemed to find this new approach provoking and challenging. He was also honestly unclear about what I meant and wanted to know what I expected of him. I told him that I expected us to talk about it. For instance, why was he so often late and what, if anything, did he intend to do about it? At the very least I thought it was important enough that we needed to discuss all of the possible reasons why he was so consistently late to our sessions.

For many weeks we continued to try and talk about his behavior, but with very little success. The conversation would usually drift back toward his usual comments about people at work, his girlfriends, etc. Finally, one day, as some clients are prone to do, he initiated the breakthrough interaction. He came late as usual. When he entered the office, we both chuckled, something that, for some reason, we had each done many times as he entered the room. On this day though he sat down and asked me, "why did you laugh just then when I arrived?" his tone was obviously confrontative, angry, and accusing. I began to feel anxious and a little vulnerable. Now it was my turn to feel taken aback. "What do you mean?" I asked, not sure what was going on because he had never acted this way before. "I mean how you laughed just then, why did you do that?" I answered truthfully that I was only barely aware of having done it and that I honestly had no idea why I had done it. He looked at me skeptically and then I realized that this was a new relational behavior and that it might be vitally important to examine it carefully.

I told him that I would give some thought to his question and let him know when I thought I had an answer. I thought I could do this while we went on with our session, then I invited him to get on with whatever else he wanted to talk about while I thought it over. He agreed. Toward the end of the session, I believed I had it sorted out and told him was I ready to give him my answer. He seemed eager to hear it.

First I asked him to tell me why he had asked about my laughter. He said it was because of how it felt, so he wanted to know what was going on. I asked him to tell me how it had felt to him. He responded that it felt like I was "laughing at him." I said that I had thought so, that he seemed to feel "put off" or "put down" by my laughter. He agreed that he had felt that way. I then stated that I had concluded that my laughter had indeed been a message to him, but not one of ridicule. What I was aware of feeling was that every time he was late I had the feeling that his commitment to the therapy work was tenuous and not sincere. I believed my laughter was an expression of the anxieties I felt about how insecure our relationship felt to me and my confusion about how seriously I should take our work. He studied me for a long time and then he nodded and said, "I've heard this before, other people, like some of my girlfriends, have said the same thing about me, that I never seem to be serious about my commitment to things and that they get the impression that I could leave at any time."

After this "breakthrough" from enactment to engagement, he became more willing to talk about painful relationship experiences in his childhood and within his family. From then on little attention was given to his work relationships, yet those relationships began to improve. He was more inclined to be on time, or closer to on time. He began to focus more consistently on more deeply personal and meaningful topics from week to week. Toward the end of therapy he stated that he had learned more about himself than he had ever imagined. He felt less anxious, angry, and depressed, but he was still not sure what he wanted to do where women were concerned.

Careful attention should be paid to all client nonverbal behaviors. Many times during therapy sessions, the first, and perhaps only, evidence of emerging feelings are nonverbal signals.

Client nonverbal signals are often unconscious, or barely conscious, indicating presence of thoughts and feelings with deep-seated origins. Facial expressions and gestures such as smiles, frowns, grimaces, widening of the eyes, and raising of the eyebrows can speak volumes. Positioning of the torso, arms, legs, hands, and feet can signal numerous affective responses, rejoinders, and attitudes. Voices soften or amplify depending on the sensitivity and urgency of the subject matter. These can be fairly obvious displays of affect. Therapists need to be aware of subtler cues, many of which are expressed unconsciously, but convey a host of important relational messages.

One of my clients (preoccupied-ambivalent style, with some dismissive-avoidance features) is very extroverted and outgoing. She often enters the office in a "get down to business" manner and begins to hold forth on the past week's events. It is not hard to know what she is thinking or feeling, because she seemingly has no problem expressing herself. She has good social skills and confidence in her competencies. For several weeks I assumed that she was open and receptive to my interventions, because she never argued or objected. I also noticed, however, that she never commented on my inputs. After I had made them, they seemed to get "filed away" somewhere and never revisited unless I brought it up again. I also began to notice that sometimes when I made comments she would look down slightly. Once I noticed that, although she did not look down, her eyes seemed to "glaze over" softly.

When I commented on noticing these gestures she rejected, for the first time, my observations as inaccurate. She insisted that she "didn't do that and, if she did, what was I trying to make of it?" I persisted. I told her that she seemed to "not take me in" and I was beginning to feel that my comments had little impact on her, since she never incorporated them into her ongoing thoughts or what she elected to talk about. She continued to resist these notions and I observed a slight expression of annoyance or impatience, which I also commented on. Again she had no idea what I meant or why it mattered, but she said that she "would think on it," thereby signally it was time to bring this topic to a halt.

Several sessions later I noticed the same nonverbal responses to my remarks and again I had the distinct feeling that was I being "shut out." I stated that she appeared to be shutting down and shutting me out, like she did not want me to comment on what she was saying. She seemed exasperated and said in a harsh tone of voice, "well it's just that I had some things I really wanted to talk about today, and you are interrupting me!" I responded by saying, "I get that this seems useless and intrusive to you, but in my judgment it's important. I think we should talk about it, it affects our work. We can talk about it later if you want, but someday we need to talk about it." Realizing that I ultimately intended to push the issue, she relented and said with more annoyance, "okay, what?" I repeated my observations of her nonverbals and the subsequent feelings that I associated with them and asked her to speak to why she thought she did those behaviors whenever I had something to say or some observation to make? Could it be that she was telling me to "back off" or "butt out?"

At this point she was silent and looked down again, but this time looking downward felt different, this time it felt like she had "gone inside" to give the question some deep thought. I had finally connected. After awhile she signed and looked up. She then said in a voice that was now slightly shaky, "I don't know what it is, but I get really upset and annoyed when you are right. I can't stand it! And lots of times you are right, but I'm not ready to hear it, I mean I don't want to deal with some of that yet."

Once this important connection was made I realized that we were now on a very different relational footing, and I had no problem telling her that I would "back off" and wait for her to

tell me what she was ready to deal with, and asked her to do that, so I would know. A new and stronger partnership was established. Rather than unconsciously thwarting my well-intentioned interventions, she could now consciously inform me about her needs and desires for how to best help her. After that conversation I noticed that she continued to look down when I spoke, but much less often and for a much shorter duration. Slowly she was letting me in and allowing me to have an impactful presence in her inner process.

Another case illustrates the complexity of working at different levels of relationship dynamics by encouraging clients to speak directly to the relational struggles embedded in the enactment. I am always particularly interested in relationship breaches involving money, since paying the fee is both a highly personal as well as professional role requirement, it can often become a venue where numerous relational difficulties express themselves.

By responding in an authentic and spontaneous manner, the client is encouraged to respond likewise, and thereby find her way to the deeper relational meanings in her behavior. At times she noticeably struggles with the enactment dynamics as she tries to sort out what is real (the real relationship) from what is not (the negative transference). Eventually underlying feelings, long suppressed out of her awareness, begin to surface. She also finds these newly emerging feelings quite baffling and is uncertain about how to express them. At the end of this session it is clear that she has stepped onto a new relational territory integrating, probably for the first time, internalizations of past painful dynamics into the present relational context. In this new context, her painful repetitions can become fully aware to her and then become fully explored and understood, altering what is internalized as the process evolves.

A 23-year-old female college student client (preoccupied-ambivalent style) came for therapy seeking reasons for why she felt depressed and why she did not have a relationship. At the time of this session (middle of the first year of therapy), she has not been paying her bills. I deliberately begin the session with a forthright confrontation of the relationship rupture.

- ► T: So when exactly are you going to catch up on this bill?
- ► C: I'm still waiting for that check to come, it hasn't come yet.
- ► T: So in the mean time are you willing to pay something on the bill?
- ► C: I'm going to pay the whole thing off as soon as the check comes. I've been doing some thinking about this. You were asking me why I have a bill I can't pay. I did think about that. You were right, it seems like there is some reason that I have to think on more.
- ► T: So what did you think, what did you conclude?
- ► C: Well, I'm still doing it. Still spending $ on things I don't really need ….(begins to list them)
- ► T: So why do you think you do that?
- ► C: I don't know! I just don't seem to be able to stop myself. I don't know why I do! (Long pause)
- ► C: I think I do it because I'm depressed. I get depressed and then having toys makes me feel better. It doesn't last, later I feel bad, but for awhile at least, I feel better.
- ► T: I'm not buying it.
- ► C: You're not buying it? You're not buying what? Why are you not buying it?
- ► T: You told me you were on medications for your depression. In fact, didn't I ask you to be evaluated to see if you really need the medications and didn't you flat out refuse because you didn't want to feel depressed? So how can it be about you feel depressed or so depressed you would feel compelled to spend $?
- ► C: (Slouching down onto the couch, thinks for a long time) Okay, I see, if the meds eliminate my depression, how can depression be the reason?

▶ T: Right.

▶ C: (Thinks awhile longer) I guess, yes, it seems like there is some other reason. I don't know what it is, but yes, I sort of feel it, I feel that there is something else.

▶ T: Could the reason have something to do with me or us? Is the reason about our relationship?

▶ C: (Smiles, looks away) Well, that's funny you should say that.

▶ T: How so?

▶ C: Well, I thought that you probably thought that. I think I'm beginning to catch on. I knew you would think it was something like that.

▶ T: So what is it? What is the reason you don't pay your bill, or spend your $ on that?

▶ C: I don't know, honest, but okay maybe it is about us, but I don't think it's you. I mean, not you, you don't have anything to do with it. Does that make sense?

▶ T: Yes it does. But finish the thought, even if it doesn't make sense.

▶ C: Well okay. I don't know how to say this, it seems awful, but I don't think I want to pay you. That sounds terrible doesn't it? (Looks away again). But it is true. I don't want to pay you all this $! I have no idea how long I'm going to be here, needing therapy or if it's going to do any good at all.

▶ T: And so years from now, you are afraid that years from now, you will have gotten no better, but would have made me richer regardless. And your only hedge against that is to not pay me.

▶ C: Yes! That's right! It sounds real terrible, but that's it. I can see that happening and I would feel like a fool. Like I had been bad.

▶ T: This is interesting how you tie all of these fears into our relationship.

▶ C: Yes, I suppose so. I feel stupid saying these things, but it is the reason I don't want to pay you. What assurances do I have? How do I know that it isn't all just for you?

▶ T: The truth? You don't.

▶ C: (Long pause) And if it is just for you, then where am I? What am I going to have, when you are tired of me needing you, you could just say no more, or something and then I'm completely out, aren't I?

▶ T: What assurances do you want?

▶ C: That I matter, that it's not just for you.

▶ T: Why those assurances?

▶ C: (Long pause) Because sometimes I feel helpless to control things. I don't even know what you really feel about me.

▶ T: Why does that matter?

▶ C: It matters because then I would know where I stand and if you are going to give me the boot or not, maybe at the wrong time, maybe when I need you the most.

▶ T: So, if I say I love you, then you would feel safe and secure?

▶ C: (Another long pause) I'm confused now. What were we talking about?

▶ T: We were talking about love and assurances.

▶ C: Were we?

▶ T: Yes.

▶ C: Well, okay, sometimes I feel a lot like how I felt in my last relationship, since then, I feel I have to be extra careful, about needs and all, and the helplessness that … I hate this, why do I pay you for this?!

▶ T: When you feel helpless you need to be reassured.

▶ C: Yes, but now I have forgotten what I was saying (Begins to cry). What was I saying? (Pushes back the tears)

▶ T: What made you so sad just then?

▶ C: (Shrugs) I don't know, something to do with being put out or dumped out and there's nothing you can do about it. But it does feel like something just happened, like something just got shaken loose or shaken out.

At this juncture the client and I had a renewed sense of trust and respect for one another. We also had something that we did not have before, a deeper level of analysis of the problems. She was also now more open and available for exploring the more vulnerable parts of her relational injuries and traumas. She did indeed begin to pay her bills, although she now talked about the sense that it represented her ability to trust me and believe that I could have her best interest at heart. Within a few months, she got a dog and began to address her loneliness. Within another few months, she began a relationship, which lasted for over a year, and she felt hopeful that she was ready to make the effort to seek intimate connections.

5.4   Summary

Numerous research studies conducted over at least 3 decades have produced convincing empirical evidence that the therapy relationship is predictive of outcome. Outcome studies consistently show a medium to high relationship between the quality of the therapeutic alliance and the positive results across treatment modals and methods. Relational factors such as therapist' personal qualities of empathy, compassion, acceptance, understanding, etc. were once thought of as "common" or "nonspecific" variables, but no longer. Due to the preponderance of empirical research, relational factors have been redefined as mediator variables. As such, it is now imperative to include relationship competencies as part of professional training for all practitioners. Every theoretical orientation needs to train practitioners to integrate relational components into treatment methodologies.

Much remains to be done to clarify and define the construct and the essential components. Part of the difficulty is the identification of the many possible variables that impact an interactive phenomenon and the complexities of measurement inherent in such a process. Different alliance instruments have been developed, with the working alliance inventory (WAI) becoming the most widely used. Use of the WAI at the third through fifth sessions has been shown to eliminate confounding between symptom reduction and the correlation between early alliance formation and subsequent treatment outcomes.

The construct itself (i.e., the "therapy alliance") is yet to be concisely defined. Different authors and test instruments used different components and criteria. Despite this fact, some alliance promoting elements have been commonly cited. Positive therapist contributions include: self-awareness, genuineness, empathy, compassion, acceptance, flexibility, attentiveness, promoting the establishment of collaborative treatment goals, and adequate therapy skills. Therapist must also have adequate skills in cultural and demographic factors, maintenance of role congruence, and recognizing and addressing relationship ruptures, and therapeutic impasses.

Evidence also supports the importance of understanding and taking into account pretreatment, client, and therapist variables. Some evidence suggests that client expectations and preferences concerning treatment methods have some impact on self-report alliance ratings. Another important pretreatment variable is the interactive effects of the attachment bonding histories of both participants. Secure attachment styles versus insecure styles have been shown to affect adult interpersonal functioning. Therapists need to be cognizant of their own attachment styles, as well as their client's, in order to establish effective therapeutic bonds.

Relational orientations such as object relations and intersubjective and functional analytic psychotherapy approaches have developed contemporary treatments predicated on using the therapy relationship as a main source of assessment and intervention. Analysis of interactions occurring within the relationship context offers clients insight into long-standing dysfunctional interpersonal patterns. Object relations and intersubjective approaches hail from a psychodynamic orientation. These orientations assume that curative factors are based on the internalization of new and healthier mental representations of interpersonal relations and motivations. Functional analytic psychotherapy is a cognitive-behavioral orientation. In this model, it is assumed that reinforcement of more adaptive interpersonal behaviors acts as a corrective factor. In any case, increased awareness of dysfunctional interpersonal patterns allows clients to formulate more satisfying and healthy ways of connecting to others.

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6 Translating Science into Clinical Practice

Thomas L. Sexton · Christopher W. Hanes · Jeremy C. Kinser

Abstract: In this chapter, we propose a developmental framework of competencies for the integration of science and practice. We believe a shortcoming of traditional competency models stems from the tendency to view science and practice as distinct entities that need to be linked rather than addressing their dialectical relationship. We argue that competencies for translating science into practice must acknowledge the inexorable link between the two. To accomplish this conceptual shift, we articulate the knowledge, attitudes, and skills necessary to define competencies pertinent to the realization of the scientist-practitioner. Four primary attitudes outlined include scientific mindedness, curiosity about how things work/what works, acceptance of ambiguity, and embracing the dialectical nature of science and practice. Core domains of knowledge identified include an understanding of scientific methods, familiarity with clinical intervention research, understanding the role of evidence based practice, and specification of clinical practices. We also propose skills necessary for the translation of science into practice. Skills include assessing scientific findings, consuming research through a levels of evidence lens, practicing research based clinical intervention protocols, and becoming a local scientist. We believe these three domains encompass both basic and expert competencies that are necessary for learning, developing, and functioning as a profession within the scientist-practitioner paradigm.

6.1 Overview

The identification and adoption of core clinical skills and abilities have long been the goal of the professionalization of psychology. The competencies approach (Bieschke, Fouad, Collins, & Halonen, 2004; Kaslow et al., 2004) is built on the idea that if the core abilities and related behaviors are identified we can better chart the appropriate course of professional development, create standards to judge the development of professionals, and measure the core skills of those practicing the profession. Core competencies and the standards for training and practice that evolve from them involve the knowledge, skills, and attitudes that allow for learning, developing and functioning of a profession. For psychological practitioners, competencies point out the "common" and "core" abilities needed to practice professional psychology. For training programs, accreditation bodies, and licensing groups, core competencies provide guidelines and training standards that provide curricular and training direction, points of evaluation, and entry-level standards. In all these ways, competencies play a critical role in the evaluation, identification, and training of professional psychologists. Thus, identification and use of accepted competencies of a profession have a wide-ranging impact in influencing treatment decisions and clinical decision making of practitioners both now and in future generations of professionals.

This chapter focuses on identifying the core competencies in an unaddressed area of professional psychology: the *translation* of research and science into clinical practice. Research and practice competencies are not new (Bieschke et al., 2004). Most often these approaches focus on discrete research and practice competencies leading to listing and identifying those that capture either the research/science or the practice domains. Few previous efforts have focused on the specific components required to successfully "translate" science into practice.

Attention to the "translation" between science and practice is important, given the central role of scientific research in the understanding and practice of the wide range of activities that fall under the umbrella of professional psychology. Furthermore, identifying the competencies that *link* science and practice has become particularly important given the ongoing and sometimes contentious debate between science and practice in psychology. In fact, the "gap" between science (research in particular) and practice is no less evident today despite the increases in research, the rise of evidence-based clinical protocols, and the increase in clinically relevant research methods (Alexander, Sexton, & Robbins, 2002; Sexton, Alexander, & Mease, 2004). The debate takes many forms. For many, the science of psychology is seen as over simplified, clinically irrelevant, and unable to account for the unique nature of clinical practice (Westen, Novotny, & Thompson-Brenner, 2004). For others, the practice of psychology is viewed as undisciplined, lacking a systematic approach, and based on principles and approaches that are more traditional than a verified and dependable fact. With the development of evidence-based practices (EBPs) and EBP guidelines, the disconnect between science as developed through research and as developed through practice has grown even more extreme in recent years (Kazdin, 2008; Westen et al., 2004).

We approach this chapter with the view that "translating" science into practice requires a particular set of competencies that focus on how one can move the knowledge of science into the daily clinical practice of psychologists. In fact, we suggest that what is missing is not a more complex list of abilities, knowledge, and attitudes in either research or practice but instead a focus on the linkage or the "hyphen" that connects the practitioner with the scientist (scientist-practitioner). As such, we suggest that integrating science and practice in psychology requires a conceptual shift away from viewing science and practice as distinct domains and toward one that considers these seemingly different domains of the work of a clinical psychologist as activities that occur together and exist in a dialectical relationship with one another. We suggest that science and practice are, in fact, different sides of the same coin: each bringing a unique perspective to understanding the same process of client change. Thus, both the accumulated knowledge of methodologically sound and systematic science and expertly conducted clinical practice are necessary and neither is sufficient to bring the best available treatments to the clients who seek the services (Sexton et al., 2007). Considered in this way, science and practice in psychology not only go hand in hand but are critical for the success of one another and have the potential to help overcome the continuing gap between the domains of research and practice.

Our goal in this chapter is to take a competencies-based approach to the science-practice "hyphen" by identifying and describing the attitudes, knowledge, and skills that facilitate the translation of the science of clinical psychology into the practice of clinical psychology (see ❯ Fig. 6.1). To provide a foundation for the discussion, we first create a context by reviewing the apparent difficulties in translating science into practice by considering the role of science in the practice of clinical psychology, the scientist-practitioner model. We then focus

◘ **Fig. 6.1**
Science–practice "dialectic"
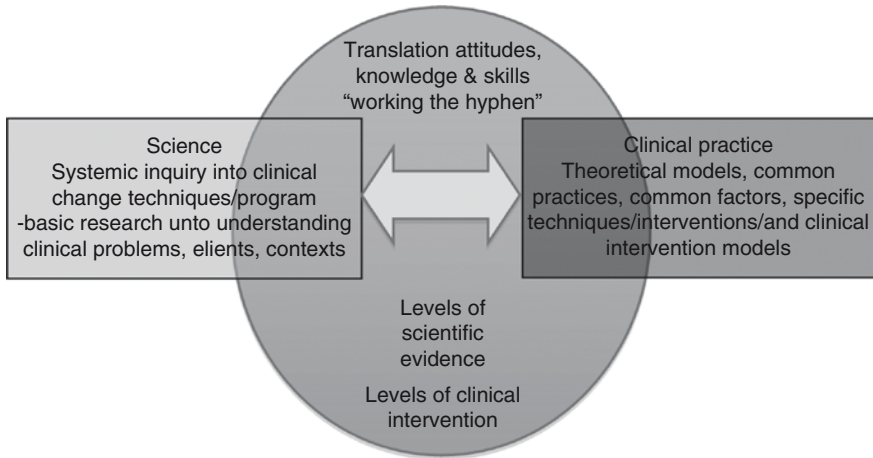
on the core attitudes (scientific mindedness, openness, and acceptance of ambiguity) and knowledge (understanding the scientific method, clinical intervention research, EBPs, and specification of clinical practices) needed to move the scientific findings of clinical intervention research into clinical decisions making. Based on these core attitudes and knowledge areas, we identify the linking skills necessary to translate science into practice. In each area, we address the basic and expert competencies and the developmental trajectory between the basic and expert competencies within the levels of science as well as within clinical practice. Finally, in each area we provide concrete case examples and descriptions of each of the competencies and how they vary by level of scientific and clinical complexity.

6.2   The Role of Science in the Practice of Clinical Psychology

Science has always been a central part of psychological practice. Like all other professions, the scientific process is viewed as a set of inquiry methods that produce systematic knowledge, which extends beyond the individual, cultural, and personally bound perspectives of clients, the clinical process, and the basic understanding of the person. The embodiment of science in clinical practice is the scientist-practitioner model, a central core of training and practice of psychology since its inception (Committee on Training in Clinical Psychology, 1947; Raimy, 1950). This model espouses and aspires for the integration of science and practice, and is relevant to both new professionals entering the field and seasoned practitioners. According to Belar and Perry (1992) the goals of the scientist-practitioner model are critical thinking and bridging the gap between scientific foundations and professional practice. Jones and Mehr (2007) identified three vital assumptions at the core of the scientist-practitioner model. The first is the expectation that psychologists will develop the requisite knowledge and skills to create and consume scientific knowledge, developed through the methods of clinical research to facilitate effective psychological services. The second assumption is that research is necessary in order to develop a knowledge base of successful practice. The third assumption is that direct involvement in

clinical practice and research activities interacts in a manner that contributes to the study of important social issues. In short, the ideal realization of the scientist-practitioner model is a professional who is directed by systematic scientific methods for the development and enhancement of practice, with the best interest of the client as the primary focus (Jones & Mehr).

In reality, being a "scientist-practitioner" is not easy. It is assumed that the findings from various types of process and outcome studies and wide-ranging types of studies of clients, therapists, and the clinical change process can be integrated into clinical decisions made by a practitioner. The successful scientist-practitioner must have the attitudes and knowledge of both a scientist and practitioner, who can consume the broad and vast knowledge of science to find guidance in the clinical process. Thus, translating science into practice assumes a very complex set of research and clinical knowledge and skills that are put to use in clinical decision making. Furthermore, with the continuous growth in research findings a practitioner is no longer able to stay informed on current research by reading a few journals each month. In fact, estimates are that it would take 627.5 h each month to stay up to date with all relevant research (Walker & London, 2007). To be successful, the scientist-practitioner needs to be able to translate the language of research in a way that answers and informs questions about their practice. To do so, they must have an understanding of what research is helpful, how to consume it well, and how to understand its limitations. In the following section, we approach this by suggesting "levels of intervention" and "levels of evidence" as the knowledge base for the successful translation of science into practice.

6.3　Becoming a Scientist-Practitioner

The long-standing research–practice gap and the current debates and controversies in the field surrounding the use of evidence-based treatment and science-based treatment protocols suggest that, while a noble aspiration, true realization of the scientist-practitioner model has been elusive and largely unrealized as a central model in clinical psychology. Instead, many professionals have come to identify themselves as *either* scientists or practitioners. This split is actually quite understandable. Scientists generally focus on the nomothetic (group and similarities) level of information while practitioners have a more ideographic (individual and unique) focus. Over time these different areas of primary focus have increased the difference between the scientist-practitioner roles. The increasing research–practice gap has even given rise to calls to redefine the central "scientist-practitioner" model of training in psychology established at the Boulder Conference on Graduate Education in Clinical Psychology in 1949 to be more focused on scholar-practitioner or educator-practitioner (Committee on Training in Clinical Psychology, 1947; Raimy, 1950).

We suggest that the practical difficulties in being a "scientist-practitioner" who can successfully translate science into clinical practice are not because science does not go into practice or practice into science but instead it is the manner in which these two domains are linked together or the "hyphen" between science and practice, which is the problem. In this case, the grammatical form of the hyphen represents the critical issue in translating or linking the knowledge from science and practice into systematic decision making. Considered in this way, it is the process of translating between these domains that has not been well defined either in terms of the conceptual models with which to consider the evidence of science, in regard to practice, or realized in the competencies that may accompany these. Thus, it may be that a new

model (e.g., scientist-educator, etc.) is not what is needed but instead a more comprehensive definition, identifying and describing the basic and expert competencies of translating science into practice is what is missing. We approach this by using two primary conceptual "levels of evidence" and "levels of practice" models that "link" and help move information between these domains in a way that results in better overall treatment. ⊙ Figure 6.1 illustrates the primary domain of interest for the sections that follow.

6.4   Competencies to Translate Science into Practice

Professional competencies are often divided into three broad domains: knowledge, skills, and attitudes (Kaslow, 2004; Kaslow et al., 2004). Attitudes are the core beliefs, principles, and mindsets upon which specific knowledge necessary to understand science, research, specificity of treatments, and the levels of scientific evidence rests. Specific skills to use, access, and apply different sources of knowledge are found in both core attitudes and knowledge. Thus, each is inexorably linked. The Scientific Foundations and Research Competencies Work Group of American Psychological Association (APA) have taken steps toward identifying how psychologists can practice scientifically (Bieschke et al., 2004). The Work Group suggested five primary competencies: (1) access and apply current scientific knowledge habitually and appropriately; (2) contribute to knowledge; (3) critically evaluate interventions and their outcomes; (4) practice vigilance about how sociocultural variables influence scientific practice; and (5) routinely subject work to the scrutiny of colleagues, stakeholders, and the public. Although helpful, these competencies unfortunately do not address what is needed to successfully *translate* science into practice. Instead they represent an aspiration or ways in which clinical psychologists would "work" if they were scientist-practitioners. We suggest that for research to be "integrated" into practice different levels of science must be linked to corresponding levels of systematic practice and the specific needs of the client.

　　Within the domains of attitudes, knowledge, and skills there are different levels that practitioners may possess. Basic-level psychologists have a knowledge of, and ability to, work with and within the attitude, knowledge, and/or skills in a fairly simple way. Expert psychologists have all the foundations possessed at the basic level but with the ability to think and work complexly with the situations presented to them in research or clinical practice. In later sections, we describe the developmental trajectory and evolution from basic to expert knowledge in the intersection between science and practice. It is important to note that there is not a distinct list of what an expert and a beginner should know. In each of these domains, there are varying degrees that represent basic-, or entry-level competencies, and expert levels. In other words, experts often possess the same attitudes that someone at a basic level may have; however, they differ in their ability to apply that attitude, knowledge, or skill to particular situations, in the complexity and depth in which they use the competency. Instead there are differing degrees of breadth and utility of knowledge. Instead of a "list" of competencies for the beginner and the expert, we suggest that the differences lie in the complexity, flexibility, and creativity in one's ability to approach problems of clinical practice with the attitudes, domains of knowledge, and skills to translate research and science into that work.

　　In each section below, we describe the major construct (within the domains of attitudes, knowledge, and skills) and then describe the two poles of basic and expert mastery of the attitudes, knowledge, and skills necessary to match different levels of science and be linked to

corresponding levels of systematic practice and the specific needs of the client. Rather than lists of discrete competencies we describe the domains (attitudes, knowledge, and skills) that are critical in this translation process for clinical psychologists. The description represents the explanation of the attitude, the knowledge needed, and the skills required to do this translation. We suggest that approaching this task in a descriptive way best explains and fits the principles and understanding of competencies and allows them to be presented in a way that can be used in clinical practice. In the final section, we address the developmental progress between basic and expert competencies by providing specific examples.

6.5   Core Attitudes of Translating Science into Clinical Practice

The translation of research into practice begins with the core attitudes that provide an infrastructure for more specific knowledge domains and skill sets. Attitudes are difficult to specify in behaviors because they represent the manner in which either the researchers or the practitioners approach their subject and the general assumptions with which they approach their task. We suggest four primary attitudes that contribute to the translation of science and practice: (1) a scientific mindedness to both research and practice, (2) an essential curiosity about how things work and what works as well as an openness to new explanations and theories, (3) an acceptance of the inherent ambiguity and evolutionary nature of what we know about practice and research, and (4) a willingness to embrace the dialectical nature of science and practice. Despite the fact that you cannot "do" an attitude, we suggest that without these attitudes it will be difficult for any corresponding knowledge or skills to function as mechanisms for translating science into practice. Thus, these are critical core beliefs, principles, and attitudes of the scientifically practicing psychologist.

6.5.1   Scientific Mindedness

Bieschke et al. (2004) introduced the idea of a scientifically minded psychologist. The scientifically minded psychologist approaches clinical practice by accessing and applying the current scientific knowledge appropriately, consistently, and even habitually. More specifically, the scientifically minded practitioner becomes a local scientist (Stricker & Trierweiler, 1995) desiring to know the outcomes of their work, subject their work to study from others, and show what they do to colleagues, stakeholders, and the public. This means that they continually ask: "What do I know about this type of client, this type of problem, and this clinical context?" When working with a client, the practitioner with a scientific mind asks: "How did that work?" "What was the outcome of what I tried?" and "What more might be done?" This type of psychologist continually asks: "What are the sociocultural variables that might come into play?" "What impact does the context have?" and "What systematic knowledge might be available to use in finding a successful practice?"

   A clinical practitioner is also a scientifically minded psychologist who approaches clinical work in a systematic and intentional manner that is at the same time client-centered and clinically responsive. Scientific mindedness in clinical practice involves habitually questioning assumptions, developing potential hypotheses, and accessing the necessary relevant information. When psychologists demonstrate scientific mindedness it means that with each clinical

question the practitioner asks: (a) what are the main issues in the topic; (b) what are the different theories or perspectives on this question; (c) what factors have empirical research found to be involved; and (d) what is the most reliable and valid information available? To do this, the psychologist must set aside biases and preconceptions, avoid the temptation of superficial answers, and consider what the theories and research say. In a sense, it is as Tracey and Glidden-Tracey (1999) suggested, the logical argument of reasoning to a conclusion that might be the most critical step in the research process. We suggest that the same is true for the practice process – the critical need to "reason" to a clinical decision based on clinical experience, existing scientific knowledge, and considering the client, context, and situation at hand.

6.5.2 Systematic, Open, Complex, Curious, and Objective

Science acquires its knowledge through systematic observation, inquiry, and experimentation. The assumption is that "objective" research leads to theoretical hypotheses, which then lead to further observations and experimentation. In making these observations or inquiries, it is important to control all other factors that may influence research findings and potentially mislead us in drawing our conclusions. Openness is important because results may not always support the practitioner or the researcher's belief about the "cause." Thus, the most accurate scientific knowledge and the most useful practice information is produced through systematic, thoughtful questioning and inquiry, where the results are considered in an open way, even if the outcomes challenge the core beliefs of either the researcher or the practitioner. In this way the translation between these domains is built on the attitudes of questioning, critical thinking and open-minded skepticism based on a curiosity to understand. All assertions, speculations, and theories must be empirically tested, and the scientific evidence about them evaluated by objective and knowledgeable researchers before being accepted as valid.

The attitude of systematic inquiry is a central one for both research and practice. In the research domain, being systemic means that the psychologist follows the methods of scientific inquiry in order to produce reliable and valid results. In practice, being systematic means that the psychologist approaches the task of working with clients in a thoughtful and well-planned way moving from comprehensive assessment to purposeful intervention. A systematic attitude is an attitude shared by efficient practitioners and researchers in that both must develop hypotheses about their task (client change or studying a clinical phenomenon) and constantly question and reevaluate their hypotheses as the process of clinical or research work moves forward.

The attitude of openness described here is inherently a personal, cultural, and theoretical consideration. Each cultural and theoretical orientation brings a set of biases that shape observations and affect findings and the degree and specificity with which evidence may be integrated into practice. Researchers and practitioners have particular perspectives of their culture, class, and gender, shaped by their culture's sociocultural, historical, philosophical, religious, gender, and class experiences and beliefs. They have particular beliefs about clients, clinical change, and the definition of "successful" outcomes. Such beliefs are not inherently problematic but they do limit the awareness of other perspectives, beliefs, and explanatory alternatives for clinical or research questions. Without openness, beliefs of researchers and practitioners can bias both research and the application of research in practice. Open-mindedness also means being skeptical of common sense and personal experience. Researchers must try hard to set aside their

personal beliefs and attitudes, and the limitations of their culture and gender, as well as their theoretical perspective, to carry out objective, unbiased research. In addition to monitoring and setting aside one's own biases, the open-minded researcher should when possible be transparent about the potential biases that may impact his or her work. This entails articulating one's own biases in addition to attempting to set them aside. This can be difficult for "black-and-white" thinkers, who are looking for clear, simple, factual answers to memorize for the exam! In fact, as knowledge develops, understanding of clients, practice, and context grows more, not less, complex. The regulation and articulation of one's own biases allows for more objective and open exploration in both research and practice contexts.

6.5.3 Acceptance of Ambiguity

Ambiguity is an inherent part of psychological practice and research. The work of clinical practice is complex and the process of knowledge development through science is evolutionary. Thus, there are limitations of the degree to which science can translate into clinical practice depending on the question and the area of interest. The current research evidence is not complete and constantly changes as more is known, theories are confirmed, and principles are overturned. Any knowledge base is inherently one in motion that will change over time. In addition, there is much that science has yet to discover or may never discover about the complexities of practice. In some areas of practice there is clear evidence that could guide practice. In other areas there is no treatment model that fits common clinical needs. Thus, if psychologists are to be able to translate research into practice they must be able to have an appreciation for science as a dynamic and continuous process knowing that what is known today will change and develop over time. This would suggest that keeping up with this domain requires not only the ability to deal with ambiguity but requires being a "lifelong learner" constantly developing and adding new information based on systematic inquiry to make better clinical decisions.

Furthermore, it is important to know that even in the best of circumstances knowing what is "effective" in the practice of clinical psychology is complex. Determining the "best" treatment requires consideration of not only whether empirical evidence exists but also the extent, utility, and clinical significance of the evidence. Unfortunately, no degree of clarity or specificity can overcome the inherent ambiguity and difficulty in creating and applying clinical practice guidelines. Consequently, no set of practice guidelines can ever produce a clear and inarguable "list" or easy decision and there can never be a system that is simple to use, that produces clear-cut policy, service delivery, and clinical guidance. In the end, even with systematic practice guidelines the process of determining "what works" will be difficult, complex, and seem at times ambiguous.

We suggest that this represents the complexity of clinical practice rather than anything inherently flawed in clinical practice guidelines. It is, however, important to note that the inherent ambiguity of the knowledge base of science is sometimes difficult to accept and for many undermines their faith in the scientific process. It is not uncommon to hear, "science just can't study real things" or "one study tells this while another one says something different." The attitude of accepting this ambiguity helps both the practitioner and the researcher to respect the current limits of scientific knowledge while at the same time knowing that with more study, innovative research methods, and continued knowledge development many of the "holes" in the research knowledge will be filled. Translation of research finding that may vary widely in

their methodology and knowledge of approaching the task of practice in a research-based way requires accepting the ambiguity as a natural and hopeful part of good practice and one of the exciting elements of the profession.

6.5.4 Embracing of the Dialectical Nature of Science and Practice

What often gets lost in the traditional discussion of research vs. practice, specific models vs. common factors in practice, and evidence-based or practice-based evidence is that the goal of both science and practice in clinical psychology is the same: providing the best available treatment with the highest probability of success to the client experiencing a particular clinical problem. As noted in the APA Task Force, and many of the EBP guidelines, the best treatments are ones that are both scientifically sound and clinically relevant. Considered in this way, science and practice are one and the same. Each brings a different approach to the goal. Each produces a different type of knowledge essential in helping a client. Thus, they are two different sides of the same coin. The core element of "embracing" this dialectic (Alexander, Sexton, & Robbins, 2002) is an attitude necessary to bring knowledge and skills together to help clients and improve practice.

The "dialectic" approach means that both researchers and practitioners are able to inherently know that the question is not whether these enterprises (research/science and practice) go together but how does each inform the other with the specific issue or problem at hand. This approach also means that the competent clinical psychologist stands above many of the "either-or" struggles that often occur between researchers and practitioners and instead looks to see what and how existing, relevant, and available scientific knowledge can be apply to and be used in particular problems or issues at hand.

For scientists and practitioners these core attitudes represent the manner in which they seek information and go about fulfilling their professional roles concerning their particular area of interest. For purposes of clarity, we will present examples related to both domains of the profession. These examples will be structured in a way that one can easily identify the contribution of the aforementioned attitudes as necessary for translating science into practice within the context of problems that individuals in the profession often encounter. We will discuss the process of addressing two domain specific problems and where relevant will highlight the specific attitude at work. We will begin by discussing a situation in which a scientist has been requested to address an area of need.

Implementing the Attitudinal Competency: A Case Example. A researcher has been presented with a grant that tasks him or her in identifying and reporting what works in helping the at-risk adolescent populations. In line with a scientifically minded attitude, the researcher first attempts to identify the main issues related to working with at-risk adolescents. This includes potential modalities such as individual therapy, family therapy psycho-education as well as the major factors related to adolescents such as peers, family, school, autonomy, etc. After identifying the main features related to the focus of the research, it is imperative that the researcher acknowledges his or her own biases. This is an example of the attitude of openness, complexity, curiosity, and being systematic. In line with this attitude, the researcher would need to acknowledge his or her biases related to the field. For example, the researcher may be accustomed to thinking of research problems through a cognitive behavioral lens with a preference for individual modalities of treatment. This perspective has the potential to impact the way he or she

addresses the focus of research on a given topic. In addition, familiarity with the existing research using cognitive behavioral techniques and/or familiarity with the population of inter- est has the potential to bias one's pursuit and synthesis of new information by artificially nar- rowing the scope. When wedded to a modality, paradigm, and/or clinical familiarity in such a fashion, the researcher has inherent limitations on the potential questions, assumptions, and conclusions that he or she may derive. After the researcher has identified his or her bias toward cognitive behavioral thinking and has made an effort to regulate this bias in a transparent fash- ion, he or she is ready to ask important questions pertaining to at-risk adolescents. This researcher goes to the literature and actively adopts a scientifically minded attitude, which would focus his or her to relevant literature related to theories, interventions, and previous research studies on at-risk adolescents. While addressing these areas the researcher would also take steps to maintain an open attitude. This is essential as he or she must remain both critical and skeptical while also being open-minded regarding the information obtained from the at- risk adolescent literature. The risk here is not effectively navigating the disparity between open- mindedness and skepticism. Because this researcher has identified his or her biases in a transparent manner, there is less of a potential for his or her biases to fuel skepticism or active confirmation of preexisting beliefs. Hence, there is a tension between the open and critical stances that must be navigated when determining what is useful in the literature.

After a thorough examination of the literature, this investigator identifies two potential areas of research that may be helpful in addressing at-risk adolescents. One is an individual cognitive behavioral treatment and other is Functional Family Therapy (FFT), a family-based intervention for working with at-risk adolescents. As the researcher further explores these potential lines of research he or she finds that the cognitive intervention has less support for working with the at-risk population relative to FFT. Because of his or her earlier consideration of his or her biases, he or she is able to look past his or her desire to focus on a cognitive treat- ment and focus on the more promising FFT line of research. Up to this point the researcher has demonstrated some of the basic attitudinal competencies a researcher needs in researching in such a way that is translatable to practice. After identifying the method of treatment the researcher hopes to study, he or she may answer his or her questions in a number of ways depending on the current level of evidence related to the topic of interest. Given that the grant aims at identifying what works with at-risk adolescents it is likely that at some point the researcher will engage in relative efficacy or effectiveness studies. In other words, the researcher will want to examine the treatment in a practical context in order to note how well it actually works with a realistic sample. Depending on the results from this study (or series of studies), the researcher will adjust how he or she further studies the topic. There is an iterative process between science and practice where they simultaneously inform one another. The two con- structs share the same goal of attaining scientifically sound and clinically relevant change.

This highlights the researcher's attitude that recognizes the dialectical nature of science and practice. The final attitude that the researcher must demonstrate is one that accepts or embraces the ambiguity associated with the researcher process. First, he or she must understand that what works, in this case FFT, is complex, dynamic, and continuous. It is never complete. It is important the researcher recognizes that no particular research finding ever "seals the deal." Even if he or she satisfies the criteria set forth in the grant there will always be more questions to answer related to how one should work with at-risk adolescents. Moreover, the researcher must adopt an identity as a lifelong learner. This too has to do with accepting ambiguity. He or she must remain open to other literature findings in this area as what worked when he or she

set out at the onset of the study may be bypassed by new state of the art findings. Thus, he or she must know when it is time to change questions or research foci. Again, this has to do with his or her evaluating his or her biases and maintaining an open mind that renders him or her capable of shifting his or her focus when the literature suggests it is necessary. Thus, the process of studying the construct can begin anew as the researcher adopts a scientifically minded attitude as he or she examines whatever the new treatment may be.

Similar to the process put forth by the researcher in the previous section, a practitioner will utilize the same method in working with clients, which further underscores the dialectical nature of science and practice. For example, a practitioner has completed an intake with a client who presents with severe depressive symptoms. The practitioner faced with this new client wants to find the best way to intervene with the client's presenting issues and guide ongoing clinical decision making. This practitioner readily acknowledges his or her affinity for cognitive behavioral techniques, but, however, understands the necessity for accessing the literature to find how best to intervene with this depressive client. The process of clinical decision making requires that the practitioner identifies key factors that are related to the clinical context as well as explore the existing literature base for guidance given these specific factors. Following a scientifically minded approach, the practitioner first identifies the main factors that will potentially influence treatment including the client's presenting symptoms, contextual factors, treatment history, clinical intuition, and sociocultural variables, among others. These factors are likely to play a key role in all decision-making processes and this systematic approach, representative of scientific mindedness, requires this identification. In addition, the practitioner following an open-minded approach to the clinical process will need to acknowledge his or her own biases related to treatment in terms of treatment modality preferences, theoretical persuasions, clinical and research familiarity, and the interpersonal impact that the client may have on the practitioner. Identifying these potential biases is imperative as they can artificially narrow the manner in which the practitioner reviews the literature. In the example, the practitioner readily acknowledges his or her tendency to favor cognitive behavioral techniques and this could lead to an overvaluing of this paradigm within the literature base at the exclusion of other potential treatment options.

Given these prior steps, the practitioner can now formulate potential hypotheses and clinical questions related to how best to intervene with the client. The challenge here for the practitioner is finding a way to navigate the tension between being open-minded about new possibilities and research while also being skeptical about research findings. The goal is for the practitioner to find the most reliable and valid information to guide clinical decision making given the specific context, presenting issues, and other important factors. Following the review of the literature, the practitioner is able to find three potential interventions that have been empirically supported when working with depressive populations including cognitive behavioral therapy, solutions-focused group-based therapy, and client-centered therapy. Up to this point the practitioner has demonstrated some of the basic attitudinal competencies one needs in translating science into practice to inform clinical decision making.

The following steps in the process represent more advanced areas that require that greater flexibility and specificity be incorporated. After identifying the methods of treatment the practitioner feels appropriate given the presenting issues, the practitioner needs to make an informed decision on how best to intervene. This decision embraces the dialectical nature of science and practice as clinical decision making requires both the identification of current best practices while also considering specific clinical factors including client's presenting issues, contextual

issues, clinical intuition/judgment, and other contributing factors. The practitioner decides that given the nature of the client's presenting issues and the associated factors and the existing literature, he or she will utilize a cognitive behavioral approach to intervening with the client. Clinical decision making based on what works given the literature is complex. What works now will change and be expanded upon in the future. Further muddying the water is the ambiguity associated with what works questions. The nature of the literature base is one of being dynamic, continuous, and never complete. This requires the practitioner to embrace the ambiguity associated with clinical decision making and the notion that this process is an iterative one that requires repetition and adjustments on an ongoing basis to best guide clinical decision making.

6.6   Knowledge of Translating Science into Clinical Practice

Like attitudes, there are core domains of knowledge that facilitate the transfer of science to practice. Both basic and expert psychologists need to know about the scientific method, clinical intervention research, EBPs, and specification of clinical practices. These knowledge domains allow for the successful translation across and between science and practice. In the sections below, we describe each of the knowledge domains. In a subsequent section, we more specifically differentiate between basic and expert knowledge. In both cases, our focus is on the knowledge domains that will facilitate the use of science in practice.

6.6.1   Understanding Scientific Methods

The scientific method is one "way of knowing" that has the potential to inform psychologist in ways that other methods do not. Rather than authority (ways of knowing based on experts/ theories), personal experience (it is because it was for me), or a-prior beliefs (everyone believes this), science is a way of knowing that uses systematic methods to establish reliable and verifiable knowledge (Tracey & Glidden-Tracey, 1999). More specifically it is systematic inquiry, organized discovery, and the verification process that is aimed at developing knowledge over time (Sexton & Alexander, 2002). As a method science is nothing more than a set of assumptions and rules about collecting and evaluating data. Explicitly stated rules and assumptions allow for standard and systematic ways of inquiry. By being standard they are intended to reduce bias and produce knowledge that is more reliable and valid.

"Research" and its accompanying methods are the processes by which scientific knowledge is developed. The scientific method is a set of "rules" or procedures to systematically gather information in a manner that is reliable (it can be replicated) and valid (it represents what is intended to be studied). There are a range of research approaches that vary according to the topic of study. These approaches vary from controlled laboratory experiments to systematic observation, cognitive testing, surveys, and case studies. Each method has its advantages and disadvantages, which researchers and students must be aware of to evaluate the accuracy of the research findings. When appropriately using the methods of science and research, the appropriate question depends on stage of inquiry and the specific area of change in which you are seeking knowledge. Conversely, the choice of methodology and approach depends on the question being asked.

There are often competing epistemological approaches and methodological approaches to science which are viewed as different and almost as an "either-or." Rather than a specific type

(empirical/quantities vs. naturalistic/qualitative), the research process is actually just a systematic, inquiry-based, and knowledge-producing set of methods and skills. Research begins with a question of interest, requires a psychologist to be competent in forming operational definitions of key constructs, identifying variables of interest and their potential relationship, and using statistical techniques to answer question. The formulation of the research questions dictates the potential outcomes afforded by the scientific process. This understanding allows for the creation of useful and methodologically sound research that contributes to the broad scientific knowledge base and consumption of research when making clinical decisions. In the end, the particular type of research it is best depends more on the question than the inherent qualities of the approach.

6.6.2 Clinical Intervention Research

Methods of research can be applied to a vast array of different topics. Within clinical psychology there is a variation of the research process that is specific to the work of clinical practice. Clinical intervention research is the systematic study of the relationship between identifiable clinical practices (techniques, interventions, treatment problems) and client outcomes. Clinical intervention research is a systematic approach to understanding the practices, their outcomes, and the varying moderating and mediating variables that may affect the success or failure of different clinical interventions. This type of research is particularly useful for clinical practice because it focuses on what Wampold (2001) suggested are the "fundamental" questions of practice: (1) Does it, this intervention/technique/practice, work? (2) Where, with what, and for what does it work? (In which setting? With what "problems?" With what type of client?) (3) What about it works? (What are the clinical mechanisms that produce the change).

Types of Clinical Intervention Research. The domains of research described in the section above result from a range in types of methods. These methods are specific applications of the scientific method to the domain of clinical practice. Each of these types of research produces different information for different clinical questions. For example, outcome studies investigate the absolute (as compared to no treatment) and relative efficacy (as compared to a clinically legitimate alternative intervention) of an intervention or treatment program. Clinical trial studies (often referred to as randomized clinical trials [RCT]) are the result of randomized studies in which the emphasis is on high levels of internal validity, with some expense to ecological or external validity. RCTs are the traditional "gold standard" of clinical research and follow the same logic as similar studies used in medical research (Wampold & Bhati, 2004). Comparison trial studies evaluate interventions/treatments in relation to a systematically developed and relevant comparison intervention or treatment and are most helpful in answering questions about whether a program or intervention works, with whom it might work, and in which settings it might work. Comparison trials might not include randomization or many of the other strict methodological controls of traditional clinical trials.

Traditionally, outcome studies (whether clinical trial or comparison) are used in three ways. Efficacy studies answer questions about which treatments work under the most stringently controlled conditions. Efficacy studies have high methodological control, but are limited because they differ from actual clinical conditions. Effectiveness studies answer questions regarding the power of therapeutic interventions in actual clinical settings with conditions that replicate those that clinicians genuinely face. Although there may be decreased methodological

control (in the traditional sense) in these types of studies, they do have high clinical relevance. Effectiveness studies are often conducted in community settings at which it is not possible to match the high degree of experimental control of traditional efficacy studies. Finally, moderator studies address questions about which particular client, problem, or contextual feature moderates or affects the strength of the relationship between treatment and treatment outcomes.

Second, in addition to outcome studies, process-to-outcome studies link the conditions of therapy (preexisting and specific within-session processes) with the outcomes of clinical interventions. These studies help identify the mechanisms of action in evidence-based interventions/programs. Third, systematic case studies/N of one studies provide an ideographic view of clinical process. These studies are particularly useful for identifying the individual experiences of clients in the change process that might lead to better understanding of change mechanisms and outcomes. Fourth, qualitative studies consider the therapeutic change process from the perspective of an individual client/therapist/setting or in naturalistic settings of clinical practice. While limited in generalizability, these studies might provide evidence needed to understand processes within models or application sites. Fifth, transportability studies consider various issues related to the transportation of couple and family therapy interventions/treatments to the community settings where they might be practiced. Such studies might consider the contextual variables (therapist variables, client variables, organizational service delivery systems, etc.) that may either enhance or limit successful community implementation. While using similar methodologies as effectiveness studies, the focus of these studies is on the variables that potentially explain the contextual impact that may mediate the outcomes of established studies in community-based clinical studies. Sixth and finally, qualitative and meta-analytic research reviews contribute to understanding and identifying "common" elements, new treatment mechanisms, or differential results across studies. When an adequate number of model-specific process studies accumulate, within-model clinical change mechanisms can be identified or verified.

Moderators, Mediators, and Clinical Outcomes. The core of clinical intervention research is the integration of the various components of the scientific method with the specific elements of clinical psychology practice. The knowledge necessary to understand, create, and usefully consume the clinical intervention research requires understanding of the relationship between the primary variables (treatment and outcome) and the natural complexity of the moderator and mediator variables. Moderator variables are those factors of the client, the context, or the clinical problem that may change the relationship among the major variables of interest. For example, the gender or age of adolescents is a crucial variable to consider when testing treatments designed to change the involvement of that youth in the mental health system. Mediators are variables that provide a bridge between the variables of interest. In a sense, the mediators create the relationship of importance. For example, in a study similar to the one noted above, treatment programs for adolescents have an impact when the therapeutic relationship is considered. Without a measure of therapeutic alliance, many treatment programs are not related to any outcome. Thus, it is the alliance that provides the link in the complex formula between treatment and outcome measure. Clinical intervention research currently states that consideration of moderators and mediators is the standard because it allows the complexities of clients and the therapeutic process to be studied, thus, increasing the potential utility of the investigation. ❯ Figure 6.2 describes the relationship between the core elements of this type of research.

◼ **Fig. 6.2**
Clinical intervention research
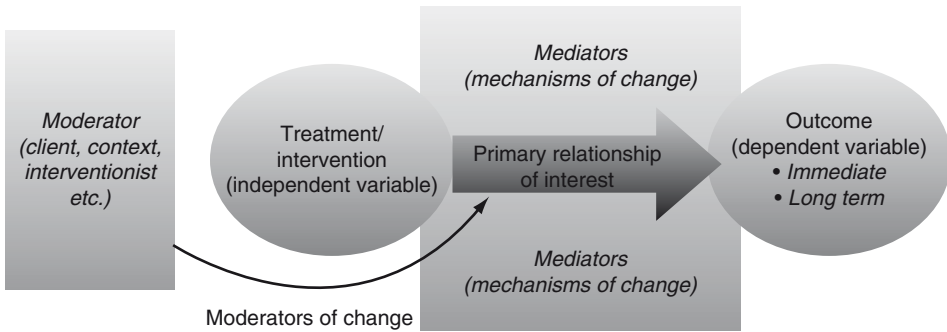
6.6.3 Evidence-Based Practice

Over the last decade, evidence-based treatments have come to embody the intersection of science and practice. The increased use of research in practice is due to a number of forces, including the dramatic growth in the depth and breadth of clinical change research, the increasing call for accountability in clinical practice, as well as calls from consumers to identify treatments that are effective and reliable (Sexton et al., 2007). The EBP movement has resulted in a recent increase in the use of clinical intervention research in psychological practice. There are a number of clinical trials, local evaluations, and research reviews that suggest that EBP makes a positive difference to clients when it is delivered well (Aos & Barnoski, 1998; APA, 2005b). The advent of the EBP movement has thus served as a further catalyst for the translation of scientific knowledge into clinical practice. EBPs bring a systematic, scientifically minded, specific, and scientifically defendable program to practitioners by setting a standard for treatment intervention and program specificity, clearly articulating clinical protocols, and identifying quality assurance measurement.

This movement in psychology mirrors similar changes in other fields of clinical practice. For example, evidence-based medicine promotes the use of systematic research reviews for clinical decision making through "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients" (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996). EBPs first appeared in clinical psychology when the Division 12 (Division of Clinical Psychology of the APA) established the Task Force on the Promotion and Dissemination of Psychological Procedures. Other efforts followed a similar process (e.g., Division 17: Counseling Psychology; Division 43: Family Psychology, Division 53: Society of Clinical Child and Adolescent Psychology, among others).

The common thread among these efforts is the use of scientific evidence as the primary basis for the determination of valid clinical treatment and preventive interventions. Regardless of the specific approach, evidence-based treatments and practice guidelines have emerged as a valuable component in clinical decision making and adds an important and necessary perspective beyond clinical experience. These works resulted in standards for clinical intervention research, the specification of clinical interventions, criteria for evaluating clinical research, as well as a *list* of effective psychological treatments (Chambless, 1996; Chambless & Hollon, 1998;

Sexton et al., 2007). In these ways, EBPs help identify attitudes, knowledge, and skills necessary to produce good outcomes for a specified client population.

EBP and the resulting guidelines have also brought criticism. For example, Westen et al. (2004) suggest that the existing practice guidelines overstate the value of research, particularly in regard to the complexities of clinical practice. They suggest that empirical support is not a decision made between a limited set of "lists," but instead requires many types of evidence, as a way to account for the complexities of clients, therapists, and treatment settings in evaluating the research. They suggest that the current guidelines are limited because of the reliance on RCTs as the most legitimate source of scientific evidence.

To help further articulate the role of science and practice in clinical psychology, the APA charged a Task Force to study evidence-based treatments and develop a policy statement on EBPs (APA, 2005a). The Task Force concluded that research evidence should be part of clinical decision-making processes and that clinicians need to integrate the diverse forms of clinical trial research along with studies of client characteristics, practice contexts and clinical judgment to determine treatment decisions. The Task Force did not identify the specific attitudes, knowledge, and skills that facilitate that integration.

6.6.4   Specification of Clinical Practices

How well-defined intervention(s) and treatment(s) are is a central knowledge factor in translating research into practice. Well-defined treatments are a hallmark of scientific mindedness, critical to good research, and a central feature in clinical practice. The more specific the treatment the greater the likelihood that the treatment will be clinically useful with a range of populations and settings and that scientific evidence can be integrated into it. Thus, well-defined (or well-studied) treatments are more likely to provide the best treatment and the most relevant and specific clinical evidence to the clinical question of interest. Specification also can occur at the level of the clinical procedure and in the details and complexity of the procedure. Interventions are circumscribed clinical interventions that address a single or group of clinical change mechanisms and which may be embedded in a broader treatment plan and may exist alongside other interventions. These interventions "stand on their own" in the sense that they can be used appropriately in various treatment processes and methods; an example might be communication skills training. A broader and more comprehensive clinical intervention is a treatment model. Treatment models are comprehensive approaches to clinical treatment with systematic treatment plans, interventions, and theoretical principles and outcome goals that are designed to address a related category of clinical problems. Treatment models have varying degrees of specificity with which they address treatment outcomes, therapist issues (treatment fidelity, therapist variables), the therapeutic relationship, and variations amongst clients and their problems. These varying levels of specificity allow for process and process-to-outcome research that systematically investigates the clinical mechanisms proposed by the model. Interventions are likely to address specific therapeutic goals while treatment programs are more likely candidates for interventions for defined groups of clinical problems and clients (Alexander, Robbins, & Sexton, 2000).

❯ Figure 6.3 illustrates variations in treatment specificity from broad theoretical models to highly specific evidence-based treatment packages. Note that these are not mutually exclusive categories. EBPs are based, to varying degrees, on the common and core elements of

◼ **Fig. 6.3**
The levels of scientific evidence in clinical practice
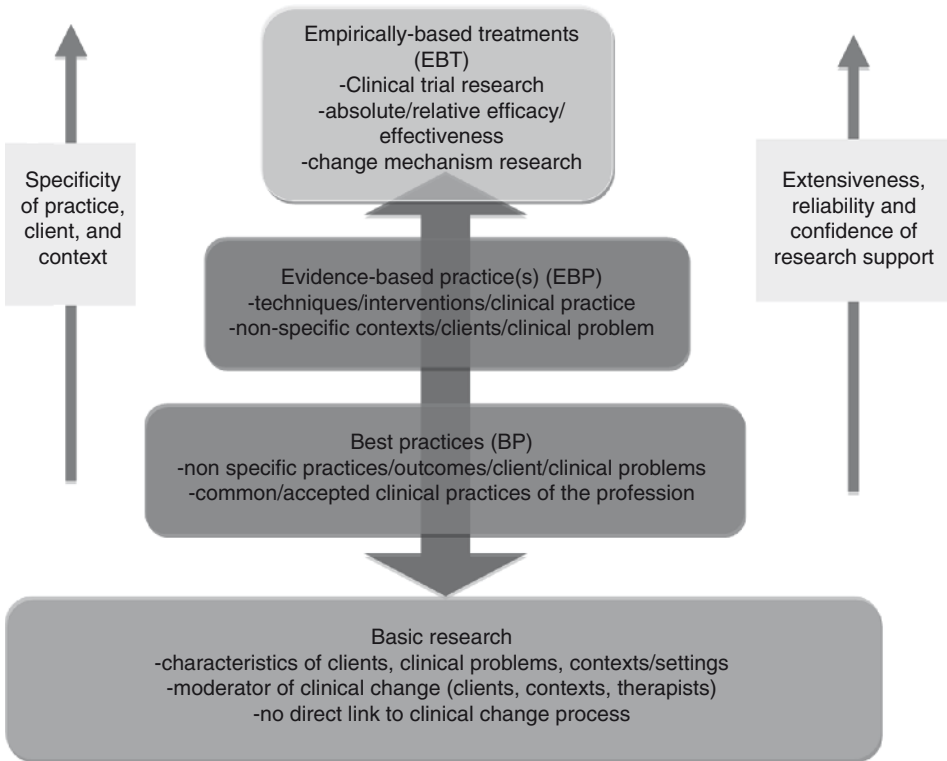
psychotherapy integration (Sexton, Ridley, & Kleiner, 2004). In fact, any good evidence-based treatment model should be based on the core common factors of effective therapy. To be considered an EBP, the intervention/treatment model must include clearly demonstrated evidence of the following: (a) clinically meaningful problems being targeted and appropriately assessed; (b) coherent conceptual framework underlying the clinical interventions; (c) specific, core interventions described in detail with an articulation of the therapist qualities necessary to follow them; (d) process research that identifies how the change mechanisms work to produce positive change, and (e) outcome research that demonstrates the absolute and relative effectiveness of the intervention or program (Alexander et al., 2000; Kazdin, 1997).

Basic and Expert Knowledge. At the most basic-level psychologists need an understanding of the broad research that helps understand clients as well as a basic knowledge of the methods and approaches of research that help consume research in a way that the results fit or match the question at hand. Thus, there is a variety of different approaches that should be considered when evaluating empirically based treatments. The basic level requires the ability to know what research methods are more appropriate for addressing a particular question. To do so the scientist-practitioner needs knowledge of the specificity of research types and the specificity of treatment or intervention (practice). Levels of evidence represents the increasing specificity of research in accounting for treatment, intervention, client, and context, which are an inherent

set of moderators that are necessary to understanding what works, with whom, under what conditions (Paul, 1967).

No single standard of methodological excellence exists. Instead, the standard used to evaluate evidence must match the type of study. Furthermore, the standards applied to the evidence will change with time as the science of psychology improves. At a minimal level, high quality studies of clinical treatments should include: (a) clear specifications of the contents of the treatment model (e.g., treatment manual), (b) measures of model fidelity (therapist adherence or competence), (c) clear identification of client problems, (d) substantial descriptions of service delivery contexts in which the treatment is tested, and (e) the use of specific and well-accepted measures of clinical outcomes.

Expert knowledge includes the ability to differentiate between levels of evidence and practices and have a broad reach of the knowledge of each. For example, experts can distinguish between different types of research and the advantages and limitations of each; thus, they are better able to translate appropriately to practice. Experts know that different research approaches bring different perspectives that are essential to understanding the complexity of client functioning and therapeutic change. Furthermore, different research methods may be needed at different phases in the developmental evolution of a treatment intervention or program. Regardless of method or developmental phase, experts know that quality research is defined as a systematic inquiry process in which the study abides by the principles of the chosen method, the rigor of which is to be evaluated by an agreed-upon set of standards, and the information generated thereby is only used within the limits inherent in the methodological approach. Additionally, with different questions and in different developmental contexts, what constitutes the most appropriate research method is likely to change. The most telling criterion is whether the research method is the best available to answer the clinical question of interest, the research is done according to prevailing standards, and the evidence produced is used within the limitations of the method.

Knowledge allows experts to consume research and sort out different kinds of knowledge based on the methodological source. For experts, "evidence" is not the same. All research approaches do not produce the same type of evidence, and some evidence is likely to carry more weight in different clinical decision-making situations than others. For example, larger clinical trial studies might be most useful to determine the main approaches to use with specific clinical problems, while process studies with small sample sizes might provide more useful clinical guidance within a therapeutic approach, such as how or when a particular clinical strategy or technique might be best utilized.

Experts know the limits of the diversity of methods. Some hold RCTs as the most important research approach and clinical outcome standard. Instead we suggest that RCTs are a necessary but not sufficient approach to understanding, evaluating, and promoting effective practices in clinical psychology. Psychological treatments can be thought of as having various levels of evidence from the broad (does it work compared to no treatment) to the specific and clinically nuanced (why does this work in this situation with this person). Determining what are "good" treatments would be based on different methods matched to the "level" of evidence most appropriate. For example, in determining what works, RCTs provide a valuable tool to validate absolute and relative efficacy (Kazdin, 2006). However, once established, alternative approaches are necessary to answer the more "fine-tuned" and clinically rich questions. These methods may include case studies, matched control designs, and meta-analyses. Each method needs to be used when it fits the question at issue rather than used for its exclusive value. Moreover, each method should meet the established methodological quality and rigor.

In translating clinical intervention research to practice, experts also know the different knowledge produced by different types of research. For instance, absolute effectiveness evidence is a measure of the success of the intervention compared to no treatment. Such a comparison is useful in determining if an intervention can be considered evidence-based. Relative efficacy is the comparison of an intervention to a reasonable alternative (e.g., common factors, a treatment of a different modality, or a different intervention). Relative efficacy is critical to establish that a treatment is the best choice for a specific client or problem. However, when more fine-tuned clinical questions are of interest, Sexton, Alexander, et al. (2004) suggested the importance of contextual efficacy. Contextual efficacy is defined as the degree to which an intervention is effective in varying community contexts. This provides a critical dimension and a final level that focuses on change mechanisms within particular practices.

Implementing the Knowledge Competency: A Case Example. Continuing with the example of the clinical psychologist who has received a grant to explore what works best with at-risk adolescents, there are specific knowledge competencies he or she must demonstrate, both basic and expert, in order to fulfill the requirements of his or her grant. At the most basic level he or she must have knowledge of the scientific method. This competency allows him or her to formulate hypotheses, understand there are a range of methodologies available to him or her and how to carry them out, as well as how to interpret the data he or she attains. More specifically, he or she will need to have knowledge of clinical intervention research. This requires the ability to know what methods are appropriate for the specific questions he or she may wish to answer. At the more expert level, he or she will need knowledge of how different types of research can answer different types of questions while providing evidence that varies in value. For example, the more specific a study's findings, the more credit he or she might attribute to the information. Moreover, the methodology used will further influence how much he or she values different evidence sources. This researcher will understand that depending on the state of the current knowledge base he or she will want to ask questions that fill gaps. This knowledge relates to the specification of clinical practices. The more research informs practice the more the necessary questions will change. This in turn impacts both the questions and the methodology necessary for expanding the knowledge base. The researcher may find that RCTs show FFT and is the ideal intervention for working with at-risk adolescents relative to other interventions; however, he or she may need to expand on these findings by considering under what conditions the intervention is most effective.

Expanding upon the previous practitioner example, the above-mentioned knowledge competencies contribute to the process of clinical decision making for a clinical psychologist who is primarily a practitioner. Faced with the complexities of clinical work, practitioners can rely on the use of research as a means to understanding their clients, their problems, and the specific treatment options available. A basic competency associated with knowledge includes the active use of a systematic method for investigating clinical questions and formulating hypotheses about client issues. Given the depressive client presentation, a practitioner will formulate potential questions related to the client issues and how best to intervene as well as a means to investigate them in a reliable and valid manner. In the example, a basic understanding of research methods and types of evidence allows the practitioner to focus his or her efforts on community effectiveness research. This means that the practitioner has an understanding of the importance of considering treatment variables when consuming the literature in clinical decision making. The outcome at a basic level is guidance for the practitioner on how best to intervene with his or her depressed client. This usually takes the form of best practices as primary means of clinical decision making. The expert-level knowledge competency represents an extension of this

process with enhanced specificity and flexibility. This practitioner wants to know not only what works with the client given their presenting issues but also has questions related to what to do in the room. Expert-level practitioners illustrate their understanding of research methods and types of evidence by differentially weighing research evidence given their specific clinical question. This practitioner emphasizes the specifics of the depressive client and the community treatment center context as he or she knows that research and treatment factors impact the effectiveness of a given treatment. The practitioner is able to review the current literature with an understanding that specificity is needed and the existing literature may not be to the point of specificity desired. He or she uses this information to guide clinical intervention.

6.7 Skills of Translating Research into Practice

Skills are the ability to "do" and act within the attitudes and with the knowledge described above. The skills of translating research into practice described below focus on the "translational" aspect of the process. It is important to note that there are many specific research skills and practice skills needed to both produce research and do clinical work. The skills below represent ones that help translate the findings of the various types of research described above into clinical practice.

6.7.1 Accessing Scientific Finding

For the clinical practitioner the ability to access research is a central skill in the translation process. Accessing research means that the clinician knows where to go and how to look for information regarding clients, interventions, or outcomes of various clinical applications. The psychologist well versed in this competency is able to utilize the research in an ongoing fashion in his or her practice. This entails an understanding of how to access relevant databases and knowing the importance of quality of literature (peer-reviewed).

Accessing research knowledge begins with having a good question and knowing what it is you want to "translate" from the research domain. It is a specific question that facilitates accessing and ultimately finding information of interest. The question of interest is most helpful when it uses the knowledge of specification of clinical intervention and knowledge of the role of the variable in treatment/research (e.g., whether it is a moderator, mediator, treatment variable of interest or outcome measure). With a specific question in hand, the clinical needs to look to the correct type of research (outcome/process study) that is best able to answer their question.

There is a variety of sources of information to access. Accessing of information is efficient when the answers sought are found in the appropriate forums. For a practitioner, academic journals that publish empirical studies provide a wealth of information. However, depending on the specific question at hand, this may not be the most useful place for practitioners to access clinically useful information. For broad outcomes of general and specific treatments and clinical problems, it may be that review articles are the most useful. When it is specific clinical change mechanisms that are wanted, specific clinical studies may be most helpful. Accessing information is clearly enhanced through the use of computer-based searches (e.g., Psyc Lit). Professional journals focus on different types of research. *Professional Psychology Research and Practice*, for example, considers the translation of research into practice, while the *Journal of Counseling Psychology* is more

oriented toward publishing studies of specific and narrow questions of clinical intervention research. Receiving and reading journals that match to the typical questions asked by a particular clinician may also be useful. Professional books have a similar range of focus extending from theory to theory-based research. Regardless of the type of medium (computer search, journals, or books), it is the task of the consumer to match the specific question they may have with an outlet that is current, specific, and can provide answers in a way that has an empirical foundation.

6.7.2 Consuming Research: Clinical Utility Through Level of Evidence

For the translation of research-based knowledge to clinical practice, the knowledge of research must be consumed. That means that it must be taken in, absorbed, understood, and applied in practice. At the center of the ability to consume research evidence is the ability to match research findings to the clinical questions of the practitioner. As noted by Kazdin (2008), overcoming the practice/research gap and successfully translating research into clinical practice require more than just understanding the types of clinical intervention research. Sexton, Alexander, et al. (2004) in a review of the research in family psychology introduced the aforementioned "levels of evidence" approach to help make the different types of research more useful to translate into clinical practice. ❯Figure 6.3 illustrates the nested model of scientific evidence from basic research to empirically based treatments. Basic research focuses on understanding clients, context, clinical problems, issues of the therapist, among many others. The levels described in ❯ Fig. 6.4 are useful because they help the clinical psychologist differentiate

◼ **Fig. 6.4**
The levels of clinical practices
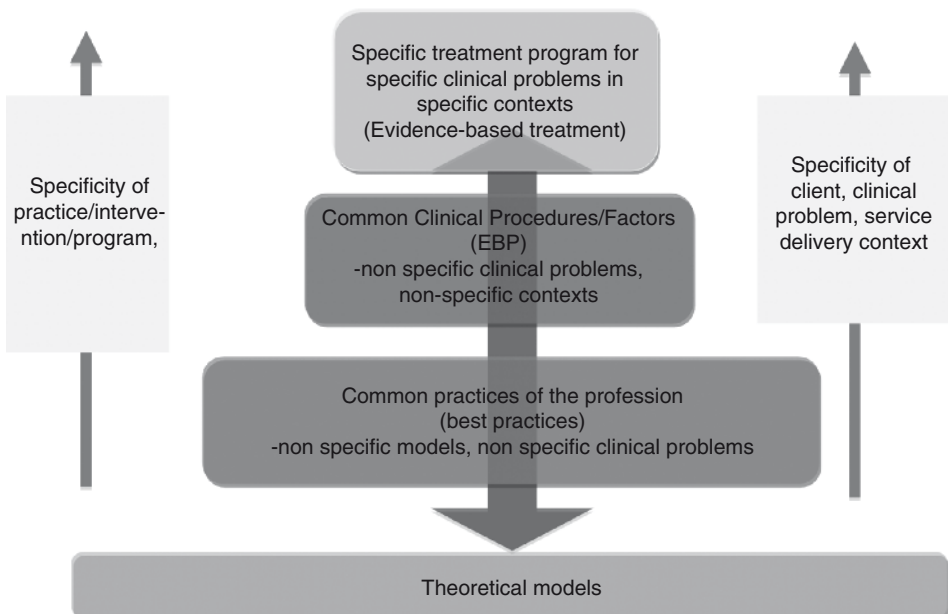
between research types and thus understand and use research in ways in which the research type fits the question or the interest of the psychologist. Each level varies by the specificity of the clinical intervention that is the focus of attention and the specificity of the client, context, and clinical problem. The methodological rigor needed to systematically and reliably conduct studies is also important to note. This is not intended to be a linear or hierarchical model but instead one that recognizes the importance and contribution of each tier.

Basic research is useful in "understanding" and forms a valuable foundation upon which systematic study of clinical change is based. This type of research is not one that can directly guide practice and is not a source to turn to when wanting to know how, when, and where to practice. Instead it is a useful guide and broad source of knowledge upon which to base additional study. A next, more specific level of evidence would identify a type or domain of practice. We designated this as "best practices" or those activities generally accepted by the profession as useful, helpful, and appropriate ways of approaching clients. Here, the study of research is focused on the process of clinical change. It is very likely that neither the practice nor the client or outcome is specific. Thus, outcomes with this type of research tend to be more general in their guidance.

EBP is a broader term that refers to clinical practice that is informed by evidence about interventions, clinical expertise, patient needs, values and preferences, and their integration in decisions about individual care (APA, 2005b). Kazdin (2008) has further articulated EBP as consisting of integrating evidence, clinical expertise, and patient considerations and then making a judgment of what to do. An example of EBP is cognitive behavioral treatment for a depression without contextual specificity. Clinicians may utilize cognitive behavioral treatment based on a combination of the notion that it generally has strong support in the literature coupled with their clinical experience and intuition as well as specific client variables in coming to a decision regarding treatment.

Research focused on specific intervention programs with specific clients in specific contexts is often termed evidence-based treatment. The research and utility of this type of work is very specific in identifying outcomes, processes, and clinical protocols. For example, an empirically based treatment for at-risk adolescents is FFT (Alexander & Sexton, 2003). This treatment model has been independently replicated and consistently yields significant results in a wide range of community-based settings. FFT provides a conceptual map for the practitioner that provides specificity, flexibility, and direction in treatment when applying this evidence-based practice. This top tier of evidence-based treatments consists of the treatments that have yielded significant empirical support using various research methods, usually focused on the use of RCTs during initial phases.

The value in the "levels of evidence" perspective is in how it can be applied in answering clinical questions and ultimately in understanding the potential value of clinical interventions. Instead of applying a single "research" perspective, a "levels of evidence" approach allows the clinical practitioner to successfully apply knowledge from diverse research methods. The "levels of evidence" view guides a practitioner in the process of matching their question with the type and "level of evidence" needed in order to make useful clinical decisions. For example, policy makers ask about what practices or treatment models to use, how to spend money, and what practices to promote regarding the pressing problems of the people and communities. These questions are probably best informed by broader "levels of evidence" that addresses absolute, relative efficacy/effectiveness, and transportation-based studies. For agency administrators, similar service delivery questions arise. For example, they may ask what practices to

use and whether they would be effective in their local setting. These questions are probably best answered by model/treatment studies of the moderators of clinical outcomes that involve much more of a context type of efficacy (does it work in this situation given these complexities, can it be transported to this agency?). Clinicians need to know what to do "in the room" and thus need a fine-tuned and specific level of evidence focused on the change mechanisms and their interaction with differences in client and setting. These questions are best answered by change mechanism and process-based research. The knowledge from diverse methods applied to the correct clinical questions provides the most comprehensive view of good clinical treatment.

6.7.3   Practicing Research-Based Clinical Intervention Protocols

Identification and dissemination of scientifically based treatments or interventions is only helpful if they can be implemented in "real life" community-based clinical settings. This critical skill of translating involves accurate assessment of clinical problems and client characteristics, matching available research on treatments, and the application of treatments to the client. Moreover, the accompanying clinical protocol needs to occur in a highly adherent way with the client. Thus, a psychologist with this competency should be able to administer a treatment while following its manual and maintaining treatment integrity. Moreover, this psychologist is capable of matching the manualized treatment to its intended target population within its intended context. The practitioner should have an understanding of the specific change mechanisms associated with the treatment and their theoretical underpinnings. At this level a psychologist understands the differences between an evidence-based treatment regimen and interventions that have empirical support. At the most basic level, this psychologist is capable of understanding a treatment manual and how it is meant to be applied.

6.7.4   Becoming a "Local Scientist"

The systematic inquiry of research and science is not the sole domain of researchers. Clinical practitioners may actually be the best located to conduct the systematic inquiry into the outcomes and processes at the center of clinical intervention research. Unfortunately, practitioners often do not collect information, use such information, or feel capable of conducting research. Stricker and Trierweiler (1995) coined the term "local scientist" to describe an approach for clinicians to move research into their practice. In this model, practitioners use their own practice to study profiles of service delivery, types of interventions, outcomes, and even process measures which, over time, accumulate to produce a "local" set of "evidence" for that practitioner in that setting. The difficulties of being a clinical practitioner cannot be underestimated, and the inclusion of local and individual evaluation has much to offer the practitioner. In addition, the skills and knowledge necessary to do so are those described above – the same ones that it takes to successfully translate science into practice (Stricker, 2002).

The practitioner who acts as a local scientist would systematically gather information in their own domain. For example, it may be that the practitioner adopts an outcome measure to determine pre (prior to therapy) and post (after therapy) levels of mental health, behavioral disorder, or healthy attitudes and behaviors. There are many easy and accessible measures of outcome that are easily integrated into practice. The service delivered to these clients could also

be tracked noting the number of times, the type of service, and the response of clients. Process measures, like therapeutic alliance, could also be measured during the course of treatment. An exemplary example of this work is that of Lambert et al. (1996) who used a simple, reliable, low-cost instrument to measure client systems frequently in therapy with the aim of providing the therapist with ongoing process information and outcomes. Percevic, Lambert, and Kordy (2004) have also developed a unique computer system to easily enter and track these assessments in such a way as to provide a number of critical therapeutic indicators to the therapist. In such a way, the clinician is able to demonstrate outcomes, be more accountable, and bring an attitude of scientific mindedness to individual practice. This is a true example of a scientist-practitioner.

Basic and Expert Skills. A practitioner with expert competencies is adept at navigating the literature base in ways that both utilize it and identify gaps within it. Specifically, this practitioner is able to utilize the existing literature base in a manner that addresses clinical issues while systematically navigating areas of weakness in the literature by identifying alternative relevant knowledge. While applying this evidence to practice, this practitioner remains critical and flexible.

A practitioner with expert competencies has the ability to navigate the literature in an adept manner while at the same time being able to differentially weigh the value of the evidence informing the empirically based treatment individually coupled with recognizing areas of less empirical support. This specificity translates to practice as the practitioner asks clinical questions that emphasize does it work, for whom, and under what conditions. The practitioner remains cognizant of the contribution of moderators and mediators in outcome studies and includes these in the process. When clinical presentation is matched with an appropriate empirically supported treatment, this practitioner is able to apply it in a flexible and clinically responsive manner while maintaining the fidelity of the treatment.

6.8 From Basic to Expert: The Evolution of Translational Competencies

Evaluating competencies from a developmental perspective is not a novel idea. The APA Assessment of Competency Benchmarks Work Group conceptualized the development of competencies as beginning during the earliest stages of professional training and progressing through more advanced stages over one's professional life span (APA, 2007). They suggested that the developmental stages progress through a readiness for practicum, internship, entry-level careers, and advanced training. Rodolfa et al. (2005) developed the Cube Model of Professional Competency which dictates the foundational and functional competencies within a developmental framework. They highlighted stages as advancing through doctoral education, internship/residency, postdoctoral supervision, residency/fellowship, and continuing competency.

These models, like most development-based competency models hold that there are certain skills that one acquires and hones at certain points in his or her professional career; moreover, these models indicate that the development of both clinical and research competencies is a lifelong endeavor. The APA Task Force on the Development of Competence suggested that a developmental perspective must undergird the assessment of competence (Kaslow et al., 2007). They suggested that there should be benchmarks and behavioral indicators associated with each domain of competence that provides descriptions of expected performance at each developmental stage. They further noted that earlier stages of development will reflect a more general simplistic approach while later stages of professional development will be more in-depth

■ **Fig. 6.5**
Evolution from basic to expert competencies

Specificity · Complexity ○ Flexibility ○

Developmental trajectory

and complex. Spruill et al. (2004) generalized Stuart Dreyfus' model of skill acquisition as depicted by Benner (2001) in the field of clinical nursing to clinical psychology. They articulated what a professional might look like at the beginner, advanced beginner, proficient clinician, and expert-level clinician stages of development. At the beginning stages, they suggest that professionals rely on basic principles and are rigid in their application of skills. As they progress, advanced beginners have a limited ability to generalize skills and begin to shift from rigid rules to more flexible guidelines. The proficient clinician demonstrates flexibility and well-understood principles. The expert-level clinician is the most flexible and can call on complex, specific interventions to address a wide range of situations.

We suggest that the developmental trajectory from basic competencies to expert competencies is less dictated by specific skill acquisition (although it is a part of development) and more focused on a professional's increasing ability to utilize his or her knowledge, attitude, and skill competencies with greater *specificity*, *complexity*, and *flexibility*. Thus, we agree with much of what Spruill et al. (2004) and Kaslow et al. (2004) suggested regarding the increased flexibility found in advanced practitioners. Much like other models of competency development, we argue that professionals should be lifelong learners and competency development never reaches a pivotal moment where one becomes "completely competent." Instead, scientist-practitioners will continue to develop, acquire knowledge, and learn how to incorporate that information with increased specificity, complexity, and in more flexible ways. Thus, moving from basic to expert is linked to moving through the developmental stages from being specific to being flexible and complex in attitude, knowledge, and skill (❯ Fig. 6.5).

6.9 Summary

In this chapter, we attempted to articulate a "competencies"-based approach to translating science into practice. As stated, development of competencies has become increasingly important in the professionalization of psychology. Competencies guide clinical training, establish standards for professional competence, and facilitate the measurement of professional standards. Rather than articulating a list of competencies for either science or practice, we focused on the often unaddressed integration of the two. Our approach recognizes the dialectical relationship between science and practice and their inexorable link. Thus, we believe the success of both science and practice is contingent on one another. Competencies outlined in this chapter are meant to facilitate realization of the scientist-practitioner by outlining the attitudes, knowledge, and skills necessary for the translation of science into practice. These three domains encompass both basic and expert competencies that are necessary for learning, developing,

and functioning as a profession within the scientist-practitioner paradigm. Furthermore, we believe it is important to take a developmental perspective when addressing the hyphen by recognizing the dimensions of specificity, complexity, and flexibility.

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Diagnosis and Evaluation

7 Clinical Interviewing with Adults

Julie N. Hook · Elise K. Hodges · Daniel L. Segal · Frederick L. Coolidge

Abstract: Clinical interviewing with adults can be a complex and challenging process, particularly for the beginning clinician. In this chapter, we break down clinical interviewing skills into understandable steps and illustrate our points with a number of examples. In the initial considerations section, we help set the stage for starting the interview through a discussion of establishing rapport and goal setting, professionalism, and setting up the physical environment for the interview. We then review basic competencies or the fundamentals of the interview process, including opening and closing the interview, selection of questions and questions to avoid, paraphrasing, observing and listening to the patient, and self-awareness. Lastly we offer a review of expert competencies, which are aspects of the interview that are often more difficult to master. These topics include areas such as rhythm and timing of the commentary during the interview, prioritizing aspects of the interview, transference and counter transference, confrontation and interpretative remarks, dealing with difficult patients, and interviewing patients with diverse backgrounds. In all, this chapter provides a road map to help novice interviewers embark on their first interviews and offers guidance for the more skilled clinicians to hone and refine their skills.

7.1 Overview

Etymologically, the word *interview* stems from the French word *entreveue*, which means *meeting* (Hoad, 1996). At the most basic level, the clinical interview is a meeting, but is distinguished by its setting, context, content, and goals. Broadly construed, the clinical interview is the foundation of all clinical activity in psychotherapy and is typically the first encounter between the mental health professional and the patient. Although specific attention is often paid to the *initial* clinical interview, clinicians do not *complete* an interview and *then* start treatment – rather the clinical interview is an *ongoing* part of the psychotherapeutic process. Emphasis of this initial meeting is the commencement of a healing professional relationship. At the end of an initial clinical interview, the professional should be able to offer a summary understanding of the patient's problems, provide some feedback about the causes of the person's suffering (perhaps in the form of a tentative diagnostic impression), and present some initial directions for treatment.

Trying to manage the content and process of the interview can seem like a daunting task. However, with guidance and practice, clinical interviewing skills will develop and eventually become second nature. In this chapter, we first discuss initial considerations for interviewing, followed by a review of basic competencies and then expert competencies. We conclude with a summary of these important skills.

7.2 Initial Considerations

7.2.1 Basic Goals of the Clinical Interview

The main goals of the clinical interview are to: (1) develop a working alliance with the patient, (2) gather relevant data about the person and the types of problems he or she is experiencing, (3) determine an initial case conceptualization (also known as the clinical formulation), and (4) establish a mutually agreed-upon treatment plan or treatment contract. Arguably, the first goal of establishing rapport is paramount because, without development and ongoing nurturance of a positive therapeutic relationship, the acts of gathering information and conceptualizing the case are pointless if the patient does not return for ongoing treatment.

Basic and advanced texts on interviewing typically pay a great deal of attention and provide guidance to the process of developing and maintaining rapport (e.g., Othmer & Othmer, 2002; Sommers-Flanagan & Sommers-Flanagan, 2003). The thoughtful and sensitive use of basic attending, listening, and accurate empathy skills is the foundation for developing rapport. In their incisive analysis, Ackerman and Hilsenroth (2003) summarize several attributes of clinicians that facilitate development of rapport and the therapeutic alliance. Notable attributes include clinicians who are warm, caring, friendly, empathic, genuinely interested in the patient, respectful, supportive, and affirming of the patient. Other important attributes include facilitating expressions of emotions and the deep exploration of the person's problems, providing accurate interpretations as well as an activity level that matches the patient's preferences and expectations.

In addition to positive personal qualities of the clinician and use of basic clinical skills, Othmer and Othmer (2002) offer several helpful strategies for enhancing rapport. These include helping the clinician relax, putting the patient at ease, recognizing the patient's emotional pain and showing compassion, assessing the patient's insight and aligning with the healthier aspects of the patient, showing professionalism and expertise, establishing appropriate levels of leadership as the clinician, providing a suitable structure to the interaction, and balancing the multiple roles of the clinician.

Regarding the second goal of the interview, namely gathering relevant information about the patient and his or her difficulties, the challenge is to effectively do so while not compromising development of rapport. Information is typically obtained through an ongoing *dialogue* with the patient about the problems he or she is experiencing as well as the history and background, which serve to place the case in context. Clinical interviews vary widely in the degree of structure that is imposed on their flow and content. At one end of the continuum is the unstructured interview during which the clinician can proceed in any direction that seems reasonable, based on the clinician's personality style and therapeutic orientation and on the patient's nature and clinical presentation (Segal, Maxfield, & Coolidge, 2008). Clear advantages of this flexible unstructured approach are extensive opportunities for gathering a deep understanding of the unique psychology of the patient and empathizing with the patient to develop a strong therapeutic relationship (Segal et al., 2008).

At the contrasting end of the spectrum are semi-structured and fully structured interviews which conform to a standardized list of questions including follow-up questions, a standardized sequence of questioning, and a systematized rating of the patient's responses (Hook, Hodges, Whitney, & Segal, 2007; Segal et al., 2008). Clear advantages of the semi-structured

and fully structured approaches are increased coverage of some psychiatric disorders that might be overlooked in less structured interviews, enhanced ability to accurately determine whether specific symptoms are present or absent which is necessary for differential diagnosis, and reduced variability among the clinician's interviewers (and diagnoses) which improves reliability.

Regardless of how much structure is imposed on the clinical interview, it typically begins with an assessment of the patient's presenting problem or chief complaint (e.g., "What has been going on lately?"; "What kind of difficulties have you been experiencing lately?"; or "What brings you to see me today?"). The interviewer can then ascertain the nature of the complaints, including onset, duration, course, frequency, and severity, as well as the impact of these complaints on daily functioning. For example, if the patient says that he or she has come to the clinic due to "being depressed," the clinician should find out exactly what the patient means by depression, when the symptoms started, how often the symptoms affect him or her, how severe the symptoms have been, and how the symptoms detract from his or her functioning. Certainly, in this example, an evaluation of the full diagnostic criteria related to major depression will be an important aid in understanding the patient's difficulties.

After obtaining information about the presenting complaint, the interviewer should gather additional information about the patient's history. This will mean a review of some or all of the following: the patient's medical and psychiatric history, family medical and psychiatric history, developmental and educational history, social and relationship history including sexual functioning, use and/or abuse of psychoactive substances, work history, legal history, and leisure-time activities. During the interview, the clinician should also assess resources that are available to the patient. Areas for questioning may include strength of relationships with family or friends, quality of housing, ties to the community, religious beliefs, and state of finances. Understanding what resources the patient has in his or her environment will assist greatly in treatment planning and in obtaining a more holistic understanding of the patient.

Depending on the professional setting of the clinical interview, there is considerable variability in what topic areas are covered after the presenting problem and how thorough the evaluations are in each possible area. For example, if the clinician is working in a setting where there are only 30 min for the clinical interview, the clinician will need to determine the most essential areas to explore. In settings where more time is allotted, the clinician will have greater leeway to explore and evaluate each area in depth. No matter what the time constraints are, it is important to gather enough information to have a reasonably thorough understanding of the patient's problems and possible diagnosis and to offer the patient treatment options.

The clinical interview is often the first time the clinician and the patient have met, and the patient is typically asked to reveal detailed personal and painful information. As noted earlier, development of a working alliance is imperative in assisting the patient in feeling comfortable enough to relay this information. As such, clinicians should be aware of confidentiality, time management, and their professional presentation and caring demeanor, which all aid in the development of a working alliance.

7.2.2   Professionalism

Clinicians should keep in mind that many of the basic social interaction skills they have honed throughout their life will be useful in the clinical setting. However, it is equally important to

remember that a clinical interview is the start of a *professional* relationship that differs from casual social interactions. In a professional relationship, the patient is the focus of the interview and the professional sets the tone and guides the conversation. There is not an equal two-way exchange of personal information in a clinical interview as there may be in a typical social interaction.

Most people seeking psychological services are experiencing some level of emotional distress, may feel unable to cope, and are seeking professional help to reduce their distress (Frank, 1982). Therefore, the clinical interviewer should foster an environment of openness, allowing patients to freely express their thoughts and feelings (McWilliams, 2004). Indeed, it is the role of the clinical interviewer to gather information while creating an environment in which the patient feels comfortable to share.

A hallmark feature of a professional therapeutic relationship is *confidentiality* (American Psychological Association, 2002). Prior to the clinical interview, patients must be informed (e.g., verbally or in a written format) who will have access to their records. For unlicensed professionals, the supervisor or clinical supervision team will be privy to the information. Aside from these individuals, a patient's information is confidential with a few notable exceptions. Aspects of the clinical interview may be relayed to a third-party payer for reimbursement. If the patient is not his or her own legal guardian (i.e., a minor or an adult who is incapacitated), the legal guardian has access to the information. In cases where child or elder abuse is disclosed, confidentiality must be broken. Finally, when there is a duty to protect the patient from himself or herself (due to an imminent suicidal crisis) or when there is a duty to warn others (due to an acutely homicidal patient), the proper authorities should be notified.

Information gathered from the clinical interview should not be the topic of casual conversation under any circumstances. Even anecdotal de-identified information can be highly identifiable if the situation is distinct. Describing a patient during the course of a conversation with friends or colleagues in what may seem to be a private setting may actually include unintended listeners who can identify the patient's information due to the distinguishing features of the story. Novice clinicians may be more prone to discussing aspects of therapeutic experiences with friends or colleagues in inappropriate settings (e.g., restaurants, lounges, etc.). They may also be compelled to discuss patients in areas of the treatment center where other listeners may be present (e.g., at the front desk, elevators, hallways). Remember that confidentiality is the rule for information gathered in a clinical interview and not the exception, and respect for confidentiality is one of the elements in forging an open and honest dialogue.

Another crucial aspect of a clinical interview is *time management*. The professional is in charge of making sure that the appropriate content areas are assessed in a constrained amount of time. The typical clinical interview lasts anywhere from 30 to 120 min depending on the setting and nature of the problem. This means that the clinical interviewer has a finite amount of time to establish rapport, gather relevant clinical information, and determine a disposition for the patient. Therefore, if the patient is overly verbose or relays irrelevant stories, it is incumbent upon the interviewer to keep the patient focused.

Part of being a professional is looking like one. Although there may be latitude in interpretation of professional appearance, many clinical settings have dress codes to which the interviewer should adhere. For example, many hospitals have policies that do not allow open

toed shoes on inpatient units. Moreover, apparel that is flashy, revealing, or overly casual will not instill confidence in the patient and can damage rapport regardless of setting. Imagine a professional who wears flip-flops, jeans, and a ripped T-shirt. This presentation may make patients feel as though they are not being taken seriously and they may lose confidence in the professional. Dressing inappropriately can shift the focus off the patient and detract from the development of rapport.

Another aspect of being a professional is being *paid for service*. For new clinicians, this often feels awkward. It may feel uncomfortable for some beginning professionals who may not feel like they "are worthy" of being paid for the services they are providing. It may also be difficult to ask for a fee for service particularly if the patient is very distressed during the session. One of the best ways to feel prepared is to understand the agency's (e.g., hospital, clinic, private practice) policy on billing. That is, some clinics have office staff, who handle billing and the clinician is not overly involved. Alternatively, it may be the clinician's individual responsibility to collect fees or obtain payment for service. In either case, it is best to discuss charges, payment, and insurance issues prior to beginning the initial clinical interview. This way there are no surprises for the patient at any point during treatment and the patient is fully informed regarding financial obligations from the outset.

7.2.3   Supplies and Physical Setting

Supplies needed for a clinical interview are fairly basic. These include clean comfortable chairs, a clock, paper, and writing utensils. In a training clinic where the sessions are recorded, the clinical interviewer may also need to ensure that equipment is in good working order prior to the patient's arrival. During the interview, taking notes may be helpful in managing the information and keeping the interview on track. One important element of note taking is to do so in a limited fashion and unobtrusively to maintain appropriate eye contact with the patient. Staring at the paper during the course of the interview and not making eye contact will certainly damage rapport.

Another basic consideration that is often overlooked is ensuring that the physical setting in which the interview will take place is set up properly prior to beginning the interview. This usually entails making sure that there is ample seating for the interviewer and the patient. Some clinicians prefer to direct the patient where to sit. This way the patient does not have pressure in making this decision and the clinician is able to sit where he or she prefers. Specifically, some clinicians prefer a particular chair or sitting where a clock is easily seen. On the other hand, there are clinicians who allow the patient to choose a seat. In this situation, the clinician can see how the patient makes decisions and how quickly the patient makes them. In either case, it is important to keep in mind that when possible, the clinician should sit near the exit and not to have the patient blocking the egress. Should a patient become angry, agitated, unruly, or potentially dangerous the clinician should be able to exit the room quickly if needed. Personal decor in a treatment room, such as personal photos, generally should be kept to a minimum. These personal items may shift the focus of the interview to the clinician rather than the patient. Furthermore, this may lead the patient to formulating assumptions about the clinician that may damage rapport and impede the interview. To avoid this situation, keep room decorations neutral and nonpersonal.

7.3 Basic Competencies

In this section, *basic competencies* for clinical interviewing are reviewed. *Basic competency* refers to skills acquired through course work, clinical training, and supervised experiences and an ability to apply diagnostic and intervention skills across patients and settings (Hatcher & Lassiter, 2007). These include the opening and closing of a clinical interview, facilitating the narrative, and identifying points that can detract from the flow of the interview. We highlight the importance of patient observation and empathic listening. Nonverbal presentation and the clinician's self-awareness are also reviewed. Mastery of these basic competencies will assist the interviewer in gathering information about the patient while also building rapport.

7.3.1 Opening the Interview: The Introduction

The first step in any interview is the *introduction*, which is a preliminary exchange between the professional and the patient. Clinicians should introduce themselves by providing their full name and title and, if applicable, level of training (e.g., second-year graduate student; licensed psychologist) and for those in training, the name of their supervisor. The clinician should also confirm the patients' name and use the patients' surname when addressing them. For example, the clinician might say "It is a pleasure to meet you, Mr. Smith," rather than saying "Great, you could come in Joe." Though there are times it may be acceptable to greet the patient by his or her first name (e.g., if the patient is the same age as the interviewer), it is a good rule of thumb to allow the patient to make the indication to do so. For some patients, using their first name can be seen as impolite or unprofessional and ultimately damage rapport.

After the introduction, the clinician should provide an overview of the session so the patient knows what to expect, for example, "Mr. Smith, first we will review material so you are familiar with your rights as a patient. Then we will discuss a number of different things, including what brings you into the clinic today. At the end of the session, I will share with you my impressions of your situation and we will put our heads together to determine the best plan of action to help you. Please feel free to ask me questions as we go along." The introduction will typically include outlining limits to confidentiality (as noted above) and letting the patient know if the session is recorded. Depending on the clinic, setting, or situation, there may be other points that are highlighted in the introduction (e.g., paperwork to be completed, polices of the clinic).

7.3.2 Structuring the Session

To what extent should the clinician actively direct the flow and content of the interview? This is an issue of *structure*. Consider the example of a patient who during an initial interview spends a great deal of time describing his "Aunt Sally's lasagna" which seems tangentially related at best to the presenting problem regarding anxiety about his career path at work. To the extent the clinician allows the patient to focus on unnecessary, irrelevant, or unproductive topics in the session, not enough structure is provided.

On the other hand, consider the example of a patient who during the initial interview describes in depth her current feeling of despair and how she is coping with her recent divorce. To the extent the clinician interrupts this process and directs the client to switch topic (e.g., "Why don't you tell me a bit about your childhood before we get into your marriage?"), then too much structure to the interview is provided. The general rule of thumb is to provide the minimal amount of structure necessary for the patient to stay on productive lines of discussion. Beginning clinicians often struggle with either being too passive (and allowing the interview to flounder) or being too active (not allowing the patient the opportunity to participate fully in shaping the process), and either way, this can be viewed as an issue of structure.

7.3.3 Listening to the Patient (Active Listening Skills)

Being a good listener is an important skill to master. Typically, patients are coming for a clinical interview because they want help and the majority of them will be forthcoming with information. It is important for interviewers to listen closely to what patients are saying and allow them to speak freely and openly. Although this sounds like a fundamental concept, it is surprising how often what a patient says is not really heard or understood by the interviewer. At times, the symptoms or experiences that the patient is relaying are so foreign to the interviewer that it becomes difficult for the interviewer to fully understand. More frequently it is the case that the clinician's attention may have momentarily drifted due to anxiety or the clinician may not be listening intently because of being overly focused on the interview agenda (i.e., what he or she should say next).

Sitting back and letting the patient speak may feel too passive for some interviewers who prefer to be a bit more action-oriented. This can stem from anxiety on the part of the interviewer possibly due to being new to the interviewing process or because of time pressures. In either case, this urge can result in the interviewer interjecting at the first silent pause or interrupting the patient mid-sentence. These mistakes can detract from the cadence and flow of the interview and can make patients feel rushed or unimportant. Although there are times that the interviewer will need to interject to get the interview back on track, when and how this is done should be decided judiciously.

7.3.4 Observation of the Patient

A good clinician is a good observer of human behavior. From the first time the patient is seen, the clinician should begin to formulate some diagnostic impressions. The patient's clothing, accessories, body language, mannerisms, word choices, and manner of speaking (e.g., rate, prosody, and tone) can provide valuable clinical information. Imagine walking to the waiting room and seeing a patient for the first time. The patient is a young man who appears disheveled. He is slouching in his chair and staring at the floor. When greeted, he speaks so quietly that it is hard to understand him and he moves slowly to the interview room. From just these few observations, some initial diagnostic impressions are being generated. Some first thoughts may include depression or social anxiety. Now imagine that the next patient is agitated, moving all around the waiting room, seemingly unable to sit still. She speaks loudly

and rapidly to the office staff asking when her appointment will begin. She is wearing flashy clothing with heavy makeup and a lot of jewelry. For this patient, the clinician is likely thinking of different diagnoses, which may include mania or a histrionic personality style. These cases help illustrate how being a keen observer will be critical to formulating diagnostic impressions.

Observation skills should continue throughout the duration of the interview. How does the patient behave during the session? Does the patient make appropriate eye contact? Does the patient interact in an overly familiar way? Or does the patient seem excessively shy and have difficulty vocalizing concerns? Also, consider the patient who complains of one problem, but does not display these symptoms during the evaluation. For instance, a young woman says that she was reading about symptoms of attention-deficit hyperactivity disorder and is sure that she has it. She states that she cannot sit still in a chair and cannot focus on anything for longer than a minute. However, during the interview, the patient sits fairly motionless and is attentive for the entire hour. In fact, over the course of the interview, several fire engines went by the clinic with loud sirens and the patient did not appear distracted at all. This is valuable information for the diagnostic impression and should lead one to consider other areas for diagnostic evaluation.

Other characteristics to observe during the clinical interview include any remarkable physical characteristics, nonverbal behaviors, affect, and language. Remember the goal of the clinical interview is to gather information about the patient, and this information comes from observation, listening, and verbal communication.

7.3.5 Nonverbal Communication

Clinicians should also be aware of their own body language or *nonverbal communication*. It is best to have an open posture (arms and legs uncrossed), be physically relaxed, and lean in towards the patient, as appropriate. This sends a nonverbal message that one is interested and attentive to what the patient is saying. Make appropriate eye contact and place a clock in an area that can be seen unobtrusively. Use of video-recording, talking in front of a mirror, or interviewing a mock patient will all assist in identifying unwanted mannerisms.

Some nonverbal gestures can be quite helpful in conveying meaning. A head nod can convey an empathetic message of "I hear you and understand" although excessive head nodding may be distracting. Gesticulation can help when explaining a point, but excessive arm movements or inappropriate gestures can similarly be off-putting.

7.3.6 Open-Ended and Close-Ended Questions

In an initial interview, after introductions are made, the interview generally proceeds with an invitation to share, often in the form of an open-ended question. By definition, open-ended questions cannot be answered with simple fact or with a yes or no response and they encourage longer responses from the patient. Open-ended questions begin usually with "what," "how," "could," or "can." This type of question allows patients to elaborate and freely discuss what brought them to see the clinician. Examples of open-ended questions to start the interview

are: "What brings you in today?"; "What has been bothering you?"; "How can I help?"; "Could you share some of the concerns or difficulties you are having?"; or "Where would you like to begin?" Opening the interview with a gentle open-ended question allows patients to start on topics that they believe are most important. Patients are also able to share aspects of the situation, which they are most comfortable with until a greater degree of trust has been developed. It is possible that some aspects of a presenting problem could be missed or defensiveness increased if more directive questions were asked first.

Close-ended questions are those that require a yes or no answer (e.g., "Are you happy in your job?") or a simple fact (e.g., the date, someone's name). As such, they limit the patient's response and are usually not used in the opening of the clinical interview. Imagine opening the interview with a close-ended question, such as "Are you depressed." This type of question limits a patient's response to either yes or no and limits discussion of important aspects of the patient's presenting problem. It is possible that the patient is depressed, but the more salient issue may be the contributing factors to the depression or how the depression is manifested. It is not uncommon for patients to perceive one type of problem as more socially acceptable than another. For example, when making the initial appointment, the patient may have said that depression was the main complaint, when in actuality it was something else (e.g., difficulties with sexual functioning, a gambling problem). While open-ended questions will allow patients to express themselves more freely, using close-ended questions to start the interview can limit the patient's disclosure, hurt rapport, and make the clinician more prone to pursuing a less essential line of questioning (Marvel, Epstein, Flowers, & Beckman, 1999).

Throughout the interview, the clinician should use open and close-ended questions, but keep in mind there are strengths and weaknesses to both. Open-ended questions allow for individualized, unstructured, and genuine responses (Othmer & Othmer, 2002). In an examination of naturalistic interviews, Hopkinson, Cox, and Rutter (1981) found that open-ended questions with minimal interruptions allowed for more emotional expression than did close-ended questions. On the other hand, open-ended questions can lead to responses that are vague, lengthy, and incomplete. Some verbose, tangential, or confused patients may spend a lot of time detailing points that offer little to the diagnostic impression and use valuable time in the interview.

Close-ended questions are most appropriate for circumscribed topics (Othmer & Othmer, 2002). These questions allow for quick, precise, and frequently more reliable responses. When asking questions pertaining to the absence of symptoms, or questions pertaining to frequency, severity or duration of symptoms, close-ended questions work well (Cox, Hopkinson, & Rutter, 1981). The downside to close-ended questions is that they may elicit false-positive responses from patients and may make them feel less able to freely express themselves.

In sum, asking only open-ended questions would leave too much latitude for the patient and the interview would be too unstructured not allowing for all the relevant areas to be evaluated within the time constraints. Conversely, asking only close-ended questions can be time consuming on the interviewer's part (e.g., a long list of yes–no symptom questions), can thwart patients from freely expressing themselves, and can damage rapport. Therefore, after the initial open-ended question, it is advised to follow-up with a mixture of both open- and close-ended questions, depending on the subject area being assessed and the patient's ability to provide the relevant data.

7.3.7 Focusing and Clarification Questions

Throughout the interview, there may be times when important information is missing or is presented in a confusing manner. At these times, it is appropriate to ask questions aimed at focusing or clarifying information. *Focusing questions* narrow the conversation to specific details or topics and are usually open-ended in format. Examples include: "Tell me about your work history."; "Where did you grow-up?"; or "How did you deal with that?" Focusing questions are useful to fill in details and to understand topics in greater depth.

  Clarifying questions are helpful when a topic is ambiguous or vague. A clarification question will help the interviewer to explore the topic and to avoid erroneous assumptions. In fact, a clarifying question can make the topic more clearly understood to both the clinician and the patient. Examples include: "What is the worst thing that happened because of …?"; "What did you mean by …?"; or "Give me an example of …." Clarifying questions expand the interviewer's knowledge on the matter and they also convey a message that the interviewer is trying to understand the situation as much as possible.

7.3.8 Diagnostic Questioning

In most settings, it is important that clinical interviewers be able to ask questions of a diagnostic nature. As such, they should review and eventually become well versed in diagnostic criteria for the various mental disorders according to the *Diagnostic and Statistical Manual of Mental Disorders, fourth edition, text revision* (*DSM-IV-TR;* American Psychiatric Association, 2000). Certainly, it may not be possible to know the criteria for all of the mental disorders, but it is important for clinicians to review and familiarize themselves with the criteria for the most common ones. In the United States, anxiety disorders affect about 40 million adults per year and mood disorders affect about 20.9 million adults per year making these two of the most common types of mental disorders (Kessler, Chiu, Demler, & Walters, 2005). Because base rates for these disorders are quite high, it would behoove clinicians to begin by memorizing these. As noted earlier, some clinicians use semi-structured interviews to aid in diagnosis, but a basic knowledge of the diagnostic criteria for the common disorders is recommended regardless of how diagnostic questions are generated.

7.3.9 Assessing Aggravating and Alleviating Factors

When trying to understand the patient's presenting complaints, it is important to assess both *aggravating and alleviating* factors. For example, ask the patient: "Can you describe these problems at their worst?" or "How bad have those symptoms gotten?" The clinician should also ask if there are times that the symptoms have been absent or more tolerable. Along these same lines, ask patients if there are things that make the problem better or worse. Questions of this nature will assist in understanding the magnitude of the patient's current complaints.

7.3.10 Question Styles to Avoid

There are certain types of questions that should be avoided, as they can be confusing to the patient, make the patient feel uncomfortable, hurt the flow of the interview, and damage

rapport. *Double-barreled* questions are those in which the interviewer asks two questions at once. An example is: "Do you feel angry and sad?" With this type of question, the patient may not know how to respond or may feel confused. Furthermore, if the patient positively endorses this question, the interviewer does not know exactly what has been communicated (i.e., Is the patient angry? Is the patient sad? Or both?). Remember to inquire about one point at a time.

Similarly it is important to wait for patients to respond to one question before posing another. It is not uncommon for patients who are experiencing emotional or medical problems to take longer to respond than the interviewer may anticipate. Therefore, the interviewer should provide enough time for patients to adequately process their thoughts and respond. In addition, the interviewer should ensure that the patient understands the question by looking for cues to the contrary, such as a puzzled facial expression. If the patient appears confused, try rephrasing the question.

Biased questions should be avoided because they are frequently judgmental and based on false assumptions. Biases typically stem from prejudices, stereotypes, or generalizations from personal experiences. For example, a clinician's grandfather recently died and his grandmother has been very depressed since her loss. At a recent intake, the clinician met an older woman who was complaining of depression. The interviewer assumed that because the patient is older and depressed, she must have experienced the death of her spouse or some other type of loss and as such pursued this line of questions. The patient responded negatively to such questions because in this example the issue was not one of loss but rather poor social skills that left her chronically feeling taken advantage of by others. This example illustrates how biases can detract from building rapport. It is also important to remember that biases can be communicated in subtle ways (e.g., nonverbal communication).

The interviewer should avoid asking *leading questions*, which force the patient to answer in a particular manner. That is, by the way the question is phrased, it suggests that there is a desirable response. Examples of leading questions are: "So you are in great health then?"; "Don't you think your husband should be more supportive of you?"; "How much alcohol do you drink each week?"; or "No previous treatment that I need to know about?" This type of questioning is even more problematic in the case of the overly compliant patient (i.e., the *yes-sayer*), as the interviewer will likely obtain a great deal of false-positive information.

Another type of question that should generally be avoided are *why questions*. Asking *why* may put some patients on the defensive and may make some patients feel they need to justify themselves. In some cases, patients may not even be able to explain why they did something or why they feel the way they do, but may feel pressured to answer. Examples of why questions include: "Why would you have done that?"; "Why didn't you talk to your spouse about your feelings?"; or "Why didn't you just say no?" Instead of asking why, a more effective route might be to inquire about the causes of behavior by stating "Help me understand what you were thinking or feeling when you did …."

7.3.11 Paraphrasing and Reflection Statements

Although questions are an essential feature of the clinical interview, if patients are barraged with a litany of questions, they are more likely to feel that they are being interrogated rather than being interviewed. *Paraphrasing* and *reflection* statements are helpful in keeping the interview moving and on track without asking a question.

Paraphrasing will convey to patients that their message has been heard. In this technique, the interviewer repeats what the patient has said in an abbreviated form and using different words. Paraphrasing assists the patient in feeling understood and facilitates the narrative. For example, if the patient says "I am so tired of all this and should just give up. The more I work at getting things done the more troubles seem to develop," the interviewer could paraphrase saying "It seems like you are really feeling defeated right now, and that the harder you try, the more things come up."

Reflection statements address what the patient has said (verbally or nonverbally) and are typically used to highlight a specific point. A reflection statement, however brief, usually marks a specific feeling or statement, and thus can be divided into *reflections of feelings* or *reflections of content*. Liberal use of both throughout clinical interviews are advised. Reflection conveys a sense of empathy to the patient by sending a message that the patient is understood. With a greater sense of trust and rapport, patients will typically relay more detailed and personal information. As such, the clinician will gain a more accurate understanding of the patient's problem. For instance, if the patient was explaining her symptoms and said "I don't know how I felt, maybe anxious or afraid. All I know is that I wanted to get out of there," the clinician may reflect feelings that were expressed ("afraid") or highlight the end content ("get out of there").

Reflection and paraphrasing will assist in the flow of the interview. They can aid in the development of rapport as patients will feel that they are being understood. In turn, the patient may relay more information that will ultimately assist the interviewer in making an accurate diagnosis and disposition for the patient.

7.3.12 Transitions and Summaries

To maintain the flow of the interview as topic areas are switched, *transition* statements can be helpful. An abrupt change in topics can make the interviewee feel disjointed and can detract from rapport. When shifting topics, it is best to let the patient know what is going to happen. Examples of transitions include: "We have spent some time discussing what brought you in today. Now I want to switch gears and find out more about …" or "I have learned a lot about …. Now I would like to hear more about …." The goal of a transition statement is to let the patient know what is going to happen next and to keep the interview flowing.

Summaries are usually longer than paraphrasing and include a more detailed account of what the patient said, including the content and emotions described in the major line of questioning. Summaries when used judiciously in the interview will let the patient know they have been heard and also provide for the patient the opportunity to clarify points that may not have been understood completely. However, summarizing continuously throughout the interview is not necessary, as it may make the interview feel redundant. Summaries can also be used as a lead into a transition, where the interviewer recounts points made in one section of the interview and then introduces a new topic.

7.3.13 Avoiding Giving Advice (Despite the Temptation)

Although it is tempting to give advice to the patient, the clinician should generally not give advice or do so very sparingly. It is alluring for some beginning clinicians to give advice because

it may help the clinician feel like he or she "is doing something" as they are just beginning to learn about the intricacies of psychotherapy. Telling patients how to live their lives may also make some ineffective clinicians feel powerful. Although giving advice may help the clinician feel better, it is usually not very useful to the patient and in fact can be harmful to the patient. Imagine a young man who presents with significant anxiety about telling his parents that he is going to drop out of college. At the end of the interview, due to the patient's increasing agitation about what to do (and subsequent anxiety in the clinician), the clinician tells the patient to call his parents and tell them because he will feel better when it is over. The patient takes the advice and calls his parents. At the next session, the patient tells the clinician that this was a horrible decision – his parents have disowned him and never want to speak to him again. The patient blames the clinician for the bad advice and the therapeutic alliance is damaged if not ruptured entirely. Although it is possible that over the course of treatment the patient may have decided that informing his parents is the best decision, ultimately it is the patient, not the clinician, who should make the decisions on specific courses of action.

There may also be situations in which patients directly ask for advice. Examples include: "What do you think I should do? Should I call my parent's and tell them I want to drop out of school?" In this situation, remember that it is not the role of the clinician to tell the patient what he should do, rather these kinds of questions are ripe for exploration in treatment. How does the patient make decisions? Why is this particular decision so challenging? In these types of situations, it is best to respond empathetically and to educate the patient that you will help him decide, but not decide for him. Giving advice, even when it is asked for by the patient directly, prevents patients from having the opportunity to learn to make their own difficult decisions and accept responsibility for their actions. After all, it is the patient, and not the clinician, who has to live with the consequences.

7.3.14 Jargon and Commentaries to Avoid

Using overly technical or erudite words will detract from the development of rapport with the patient. Clinicians do not need to be grandiloquent or use multisyllabic words to make themselves sound more professional. Instead the clinician should speak clearly using words that will be easily understood taking the patient's education level and verbal skills into account. For example, instead of saying "The etiology of your complaints is idiopathic," the clinician should say "Currently, there is no single definitive cause of your symptoms, but together we will try to understand why you are having these symptoms right now." Talking in a language that the patient understands will enhance rapport and make the patient feel more comfortable.

There may be times when technical or psychological terms need to be conveyed to the patient. In these cases, ask patients if they understand the term and define the term if necessary (e.g., "It sounds like you are having lots of troubling thoughts you can't seem to shake. These are called obsessions. Have you heard that term before?"). Conversely, there may be instances where patients use psychological (or technical) terms. If this happens, it is typically best to ask patients what they mean specifically. If further clarification is needed the patient can be asked to provide an example of a behavior. It is frequently best to ask the patient to define a psychological term, as he or she may define the term differently than how a mental health professional would. Keep in mind that speaking to the patient straightforwardly and at his or her level will aid in building rapport.

The clinical interviewer should also avoid comments that are dismissive. Imagine a young woman who comes to a clinic complaining of depression because she was not invited to a party. The clinician says: "Well, that doesn't sound too serious." This comment is dismissive because it downplays the patient's perception. It would be better to reflect and acknowledge her pain and to discover why this event was so hurtful. It is also possible that there is something more to the story. However, with a dismissive remark, the clinician would have hurt rapport and the patient would not have been provided the opportunity to elaborate on the presenting problem because her concerns were minimized.

The clinician should also avoid frightening the patient, with commentary, such as "Well that sounds very serious!" or "That sounds bad. I have never heard of anyone having that experience." As the patient is looking for support, this type of reaction will hurt rapport and may unduly alarm the patient. Further if the patient's commentary is truly bizarre in nature, it is possible that the patient may have a psychotic disorder. It is best to get the information, support the patient, and empathize with the patient's concerns during the clinical interview. If the novice clinician is concerned, the clinician should express these concerns to the supervisor.

7.3.15 Responding to the Patient's Questions and Managing Self-Disclosure

How one responds to patients' questions depends on the level of training and types of questions being asked. In the beginning stages of training, student-clinicians should generally not offer diagnostic or disposition information without first discussing this with their supervisor. For example, if during an interview a patient asks "Do you think I have schizophrenia?," then student-clinicians should address the patient's feelings that are associated with the label, but delay answering the question directly until after a consultation with the supervisor has occurred. Questions of a pragmatic nature, for example about agency policies, should be answered directly (e.g., general agency questions such as concerns about billing, payment, or times the clinic is open) or the patient should be directed to the staff person who can answer these types of questions.

The issue of self-disclosure is often related to questions asked by patients because patients may ask clinicians to reveal personal information. Revealing personal details can switch the focus of the interview from the patient (where it rightfully should be) to the clinician. An inappropriate disclosure can also burden the patient. Beginning clinicians should generally keep self-disclosure to a minimum. One rule of thumb is to freely disclose details one would not mind seeing printed in the local newspaper, such as one's age, level of training and education, and the name of one's supervisor. Clinicians should be cautious about disclosing details of a more personal nature. When a personal disclosure is made, the clinician should be able to describe to the supervisor the reason why the disclosure was made, including the goal the clinician was trying to accomplish specifically by the disclosure. Clinicians should also ask themselves: "Could the goal have been accomplished in another fashion that does not carry the risks associated with self-disclosure?" If not, another general rule of thumb is to disclose feelings rather than facts. Should patients press for a self-disclosure (e.g., "Have you ever used drugs?"), it is advisable to reflect the patient's curiosity and try to understand what is behind the question, to illuminate the patient's assumptions or concerns about the clinician. It also helps to refocus the discussion back to the patient.

7.3.16 Self-Awareness

Effective clinicians must strive for self-awareness. According to Sommers-Flanagan and Sommers-Flanagan (2003), self-awareness refers to clinicians knowing how they affect other people and how other people affect them, being aware of one's physical, psychological, and emotional presence, and being aware of how one's own culture, social class, and background has shaped one's values. It is especially important to be able to recognize and understand one's own emotional reactions toward patients, as it may provide information as to what feelings the patient may typically engender in other people.

Be aware that one's self-perception may not match others' perspective. Understanding how one is perceived will assist in honing and refining skills as a clinical interviewer. Part of understanding one's stimulus value is understanding mannerisms. Particularly, decreasing verbal utterances such as "umms," "okays," or "like" will be of assistance. Also it is important to become aware of any unwanted nonverbal gestures. For example, tapping ones foot or fidgeting with a pencil can send the unintended message of being bored, disinterested, or anxious.

7.3.17 Final Summary and Ending the Interview

At the conclusion of the interview, the clinician should attend to the sensitive information that has been shared and may want to thank the patient for sharing personal, potentially upsetting experiences. The ending of the interview is also an opportunity to review important themes addressed and provide a final summary to the patient which recounts and highlights specific points including the presenting problem. An example of how to start the final summary is: "We have discussed a lot of information today. As I understand, your feelings of … have brought you into the clinic." After the summary is given, the clinical interviewer should let the patient know what to expect. It may be that the patient will be contacted within a specified amount of time with diagnostic interpretations and disposition recommendations, or in some settings, initial feedback may be given immediately and a mutually agreed-upon initial treatment plan commenced.

7.4   Expert Competencies

In this section, *expert competencies* for clinical interviewing are reviewed. *Expert competency* refers to a level of proficiency in the complex set of skills required for diagnostic interviewing, honed and refined through internship and postdoctoral training. These skills include a breadth of knowledge in psychopathology, personality theory, and how these factors interplay and impact the patient (Hatcher & Lassiter, 2007). In this section, rhythm and timing of an interview are reviewed followed by prioritizing in an interview, examining both explicit and implicit aspects of the presenting problem, offering interpretation and reassurance to the patient, recognizing transference and countertransference, and using confrontation. This section concludes with a discussion of dealing with difficult patients, understanding and appreciating diversity, making differential diagnoses, and using clinical formulations.

7.4.1 Rhythm and Timing

Clinical interviews have a pace or tempo. In the beginning phases, the verbal exchange of information tends to be a bit slower as the patient and clinician are developing rapport and trust. Over the course of the interview, the pace will wax and wane. For example, tempo can change by the topic area being discussed. If a topic is emotionally laden, the patient may speak louder and faster. Tempo can also change based on the interviewer. Therefore, clinicians should be conscientious to the speed at which they are talking and asking questions. It is usually better for the clinician to pace questions at a slower rate when asking about sensitive matters because the patient may feel rushed or uncomfortable if questions are asked too quickly. Clinicians who tend to speak quickly will find that they have to slow down their pace for many patients, and likewise clinicians who naturally speak slowly with long pauses may find that they need to pick up their pace in the clinical interview. When possible, the clinician should try to match the pace of the patient.

Although silent pauses happen naturally over the course of the interview, the clinician should be a keen observer to understand what is contributing to the silence. If the patient appears pensive or emotional, it is a good rule of thumb to wait rather than introduce a new topic, as the patient may be self-reflective or processing some of the topics that have recently been discussed. Interjecting at this moment will detract from rapport. However, if patients appear befuddled or confused, asking patients how they feel or rephrasing the last question may be necessary. Remember that during the interview, a momentary silent pause can feel like an eternity, but the pause has likely not even lasted a minute. When clinicians interject commentary during these pauses, it is usually more reflective of the clinician's anxiety rather than facilitating the flow of the interview.

Timing of transitions, interpretations, and statements in the interview can also add or detract from the flow and pacing of the interview. As the clinician becomes more experienced, appropriate timing of these points also develops. The clinician will typically know if a commentary has been ill-timed by the patient's confused or negative reaction (e.g., stopped talking, made a remark). Depending on the situation, the response of the clinician to his or her ill-timed commentary may vary. One strategy is to say: "Let me pause, back up for a moment, and rephrase that question." If the patient was distressed by the ill-timed comment, another strategy would be to address the patient's emotions. For example, the clinician might say: "I can see that comment was upsetting to you. Let's talk about that."

Flow and timing are important aspects of the interview process. This skill develops with time, practice, and supervision. The clinician should remember that mistakes in timing of interpretations or questions can happen. Although there are different ways to handle the situation, it is important to stay calm and relaxed.

7.4.2 Prioritizing

Prioritizing aspects of the clinical interview is frequently dictated by the setting in which the interview takes place, the amount of time available to complete the interview, and patient characteristics such as severity of symptoms, age, and mental status. How a clinician prioritizes questions in an interview will be a combination of these factors. Imagine working in a hospital inpatient unit or emergency room. In these situations, clinicians tend to see higher-risk patients

(e.g., suicidal patients) and patients with more florid psychiatric symptoms. Typically, priorities in these setting are to prevent tragedy (e.g., assessment of homicidal/suicidal ideation, intent, or plan) and to offer recommendations for treatment (e.g., admission to the hospital, consultation with psychiatry).

Certainly if patients present with a crisis situation, such as intense suicidal ideation, this should be prioritized in the interview process. There are several elements that clinicians should evaluate as part of a suicidal assessment (for a comprehensive review, see Dexter-Mazza & Korslund, 2007). The clinician should obtain information about suicidal thoughts, intent, and plan, as well as frequency, duration, and severity of symptoms. Simply asking patients about suicidal intent may not always be sufficient, and the interviewer may want to review the patient's beliefs about life and death. The clinician should also obtain information as to risk factors for suicide, including depression, feelings of hopelessness, alcohol abuse, limited social supports, self-injurious behaviors, and prior attempts. Indeed, prior attempts are known to be a significant risk factor for future suicide attempts and therefore, discussing whether a patient has attempted suicide previously is essential. If patients endorse having a plan, it is important to ask whether they have taken any steps in completion of the plan. The more detailed the patient's plan, in general, the greater the risk. Clinicians should also assess the patient's intention of carrying out the plan. If the patient denies intent to carry out a plan, the clinician should also discuss protective factors that contribute to safety and the presence of supportive family members or friends. In any situation where a potential duty to warn occurs, student-clinicians should alert their supervisors.

In an outpatient setting, if patients present with safety concerns, these need to be addressed first. However, when this is not the case, the clinician's priorities include gathering information to evaluate the problem, developing rapport with the patient, and offering disposition information. Similar to casual social interactions that have an implicit order, clinical interviews also have stages, which include an opening or introduction, an information gathering phase or body, and a closing or summary (Ivey, 1994; Shea, 1988; Sommers-Flanagan & Sommers-Flanagan, 2003). Although structure and format are essential to any interview, the more experienced interviewers tend to follow the patient's lead. These clinicians tend to be less rigid in their adherence to the order of introduction of topic areas. As clinicians become more adept at rewording questions, introducing new topics, modifying question order, and following patient's spontaneous verbalizations, clinicians can elicit more information as to the symptom origin, nature, onset, and severity and possibly uncover hidden contributors to symptoms (Wiens, 1991).

7.4.3 Implicit and Explicit Aspects of the Patient's Presentation

As clinicians gain experience with clinical interviewing, they will learn to evaluate both explicit and implicit mechanisms that contribute to the patient's presenting problem. That is, explicitly patients verbalize factors that contribute to their complaints, though the keen observer can also evaluate factors that the patient is not overtly reporting. Over the course of the interview, the clinician can identify coping mechanisms, underlying personality characteristics that maintain the patients' current state of being, and interpersonal processes such as insight, judgment, and frustration tolerance. For example, during the opening of the interview, some patients may not know how to respond to the first open-ended question (e.g., "What brings you

here today?"). These patients may appear uncomfortable, may be reluctant to speak, or may ask the clinician for advice on how to proceed. The more novice clinicians tend to *rescue* patients by providing an answer, whereas the more experienced clinician may use it as an opportunity to determine how patients tolerate lack of structure. Does the patient become angry or demanding? Does the patient respond by focusing on external or internal factors that are upsetting to him or her? Patients' reactions and responses can provide information about their frustration levels, tolerance, and coping strategies in the face of uncertainty.

Although it may be difficult to fully appreciate patients' interpersonal and personality characteristics during the initial interview, clinicians can form working hypotheses based on patients' description of past and present relationships, and the in vivo interaction with patients. Overall, evaluation of personality traits or interpersonal styles of patients is important, as these factors can contribute to the maintenance of the presenting problems. Understanding these will also assist in recommending treatment approaches.

7.4.4   Understanding and Utilizing Transference

Transference is a term that originated in psychoanalytic theory and is defined as the tendency for patients to *transfer* feelings onto the clinical interviewer that have been previously directed toward other important people in their lives (Freud, 1940/1949; Sommers-Flanagan & Sommers-Flanagan, 2003). Historically, Freud postulated that psychopathology resulted from unconscious conflicts between the socialized ego and libidinal impulses of the id. He purported that conscious awareness of these conflicts and related emotions are repressed, which is what maintains the persons state of being. *Transference* is the process whereby patients shift repressed feelings, emotions, and reactions onto the clinician. With a transference reaction, the patient's response to the clinician is typically in excess or does not fit with what would be expected based on the questions or topic of discussion (Sommers-Flanagan & Sommers-Flanagan, 2003; Waska, 2007). Although this kind of reaction may not occur at the start of an interview, over the course of the session transference may occur.

Interviewers should be prepared for patients who have strong emotional transference responses. Novice interviewers are often surprised when patients cry, yell, or laugh during the course of a clinical interview and the clinicians may feel uncomfortable, particularly if the emotions are directed towards them. It is important to keep in mind, however, that remarking on a transference reaction during an interview may not always be helpful. An ill-timed comment about transference can impact the therapeutic alliance and, as we have highlighted, maintaining the alliance should be given the highest priority in the clinical interview. Transference reactions can, however, provide the opportunity to explore deeper aspects of a problem by following up with questions, such as "Can you think of other circumstances when you have felt his way?" or "That seemed to really upset you, have there been other times that you felt like this?"

7.4.5   Understanding and Utilizing Countertransference

The term *countertransference*, like transference, stems from psychoanalytic theory (Freud, 1940/1949). It refers to reactions of the clinician toward the patient, which have little to do with

the clinical interview. Although in the past, countertransference was considered a breach of objectivity, current psychodynamic theorists view this as an important part of the therapeutic process (Waska, 2007). Understanding how or why a patient may evoke intense emotions can improve the clinician's self-awareness and subsequently improve interactions with future patients. For trainees in clinical psychology, this likely occurs during supervision and can be a valuable learning experience.

7.4.6 Interpretative Statements

Interpretation has been touted as one of the most important techniques in therapy and clinical interviewing (Craig, 2005). This technique involves bringing unconscious needs, drives, or motivations of patients into their consciousness. When done well, interpretation leads to emotional dialogue that provides new information to the clinician and patient (Hopkinson et al., 1981). However, use of this technique can be controversial depending on the theoretical orientation of the interviewer. Those who follow a strict Rogerian or humanistic approach may feel that it is best to discuss only topics expressed by the patient rather than interpret unexpressed attitudes, whereas psychoanalytic clinicians tend to believe that interpretation is essential to providing insight into underlying needs and personality characteristics of the patient (Pope, 1979).

If the clinician chooses to use this technique, interpretation should be carved out in a clear and empathic manner and offered to patients when they seem most ready to accept these statements. When interpretive statements are provided prematurely, patients may feel criticized or poorly understood, which can lead to opposition from the patient or premature termination of the interview (Allen et al., 1996, Othmer & Othmer, 2002). Four variables which lead to successful interpretation include: (1) *timing* which refers to relaying the interpretation when the patient is ready to hear the point, (2) *vantage point* which suggests that the interpretation should be made from the patient's not the clinician's point of view, (3) *scope* which refers to how narrow or broad the interpretation is, and (4) *impact* which refers to emotional impact of the interpretation on the patient (Othmer & Othmer). However, some authors (e.g., Allen et al.) suggest that the success or failure of interpretive statements depends on the strength of the therapeutic alliance. In any case, clinicians should be judicious and careful when offering interpretations (Craig, 2005).

7.4.7 Reframing, Reassurance, and Instilling Hope

Reframing is a technique that helps patients view their difficulties from another, more positive, perspective. That is, interviewers provide an alternative explanation to the cognitive distortions of the patient. By reframing negative views, the clinician can help reduce distress and promote cognitive flexibility. For example, if a patient stated "I never go out and no one ever asks me out," the clinician may say "Isn't it possible that no one asks you out because you don't leave your house?"

Most patients seek mental health services because they are experiencing some sort of distress (Sommers-Flanagan & Sommers-Flanagan, 2003). Therefore, over the course of the interview, *reassuring statements* can be used to convey empathy and understanding to the

patient as well as *instilling hope* that their situation can improve. Some patients feel concerned that no one else has had feelings or thoughts like theirs and they feel reassured through normalizing of their feelings. For example, if the patient stated that she felt anxious about her upcoming exam, a reassuring remark may be "A lot of people feel anxious before exams." Be careful, however, not to make global, vague, or false statements.

7.4.8 Use of Humor

For the clinician, the use of jokes or humor should be done sparingly and with caution, especially before a therapeutic relationship is solidly formed. Although the intention of the clinician may be to lighten the mood, a humorous remark is typically not appropriate during the course of an initial clinical evaluation. Patients may also use humor, sarcasm, or jokes during the interview. Frequently, this is done as a defense mechanism when the discussion becomes too emotionally laden. The clinicians' reaction to this should be dependent on the context of the situation. At times, the clinician may feel it is best to offer a smile or laugh, and at other times, the clinician may wish to offer an interpretation statement, such as "When you start to experience or discuss your very painful emotions, you always seem to joke."

7.4.9 Confrontation

Confrontation is a technique used to focus patients' awareness on their behavior with the expectation that they will modify the behavior. Confrontation can be difficult, as the patient might be resistant. This resistance may be subtle, such as avoiding the clinician's gaze, or more obvious, such as outright denial of the situation (Othmer & Othmer, 2002). To avoid damaging rapport, the clinician should have a clear understanding of intended usage of the confrontational statement. A well-timed and useful confrontational remark can provide patients with a clearer representation of how they are perceived and help to clarify distorted beliefs (Sommers-Flanagan & Sommers-Flanagan, 2003). For example, imagine a patient who angrily yells and waves her fists stating that she does not care if she gets into a particular graduate program. However, by the intensity of their emotional expression, it is clear that she in fact does care about this issue. In this example, a clinician may say: "Although you say you are unconcerned, I notice that you are raising your voice, look angry, and are waving your fists." Note that confrontation works best when a therapeutic alliance has been firmly established with the patient and when the clinician can provide strong evidence to support his or her statements. Further if gentle confrontational remarks are used, the clinician may need to repeat the point.

Not all clinicians support the use of confrontation remarks. For example, in motivational interviewing, confrontation remarks are not used because it is believed that these remarks can damage the therapeutic alliance (Rollnick & Miller, 1995). Using confrontational statements judiciously and sparingly may help in elucidating points in the clinical interview. A rule of thumb regarding confrontation is to "earn the right" to confront by first establishing a trusting and supportive relationship with the patient. Confronting too early in an interview or too strongly without earning the right to confront will usually result in a poor outcome.

7.4.10 Dealing with Difficult Patients

Although many clinical interviews are completed without difficulty, there are circumstances that can be unexpected or challenging. First, consider symptoms which may detract from the patient's ability to be fully engaged in the interview. For example, patients who are psychotic or highly intoxicated may be unable to accurately respond to questions. Other patients may not have adequate cognitive reserve to complete the interview or answer questions (e.g., developmentally delayed individuals). Depending on the situation, the clinician may need to refer the patient to an inpatient setting or obtain background information from a legal guardian or collateral.

Patients may also intentionally or unintentionally deceive the interviewer by not answering questions or by providing vague or inaccurate responses. If during the clinical interview, the clinician feels as though the patient is being deceitful, the clinician has a variety of options on how to proceed. In some cases, the clinician might use a confrontational remark, such as "I don't understand what you are saying. Can you give me an example?" Depending on the situation, there may also be times that the clinician chooses to end the interview.

Patients who are verbose and tangential can also pose difficulties to the interviewer. In a situation where a patient is overly talkative, the clinician should be empathetic to the patient's story, but gently interrupt them and state that there are other topics left to discuss. For example, it may be helpful to make a statement, such as "I can see that you are working very hard to give me as much information as possible, but I hope you do not mind if we also discuss other topics such as …." or "Let me pause you here for a moment and ask a bit more about …." Using more close-ended or focusing questions is frequently helpful with overly talkative patients. Conversely, when patients are laconic, terse, or reluctant to speak, it is helpful to acknowledge how difficult it must be for them to discuss the situation and make reassuring statements. The interviewer should also try being more directive in questioning and waiting through, at least some, silent pauses.

It is not uncommon for court-referred patients to be more resistant or less forthcoming than voluntary patients. In such cases, it can be helpful to acknowledge at the outset the circumstance that brought them to the interview, for example, "I understand that as a requirement of your probation that you undergo treatment. Can you tell me about the circumstances that led to this?" In this way, the clinician acknowledges the patients' potential reluctance as well as provides an opportunity for patients to explain their side of a story.

7.4.11 Treating Patients from Diverse Backgrounds

Clinicians should consider how cultural and demographic factors may influence aspects of the clinical interview including the working alliance, data gathering, and treatment planning. Although beginning clinicians are expected to be sensitive to issues of diversity including gender, culture, ethnicity, sexual orientation, and age, it usually takes time and exposure to diverse populations to develop competencies in multicultural interviewing and psychotherapy. A well-developed knowledge base about diversity issues and self-awareness of how these factors may impact oneself as a clinician are needed for advanced clinical work.

As communication with patients is critical for accurate diagnosis and treatment planning, one may question how diversity issues can impact the clinical interview. Research suggests that

matching the demographic characteristics of the therapist and the patient does not have a significant impact on therapeutic outcomes, but may increase the retention of some minority patients (Gray-Little & Kaplan, 2000). For this reason, it may be beneficial to match the characteristics of the patient and the therapist when possible, but this may not always be practical. As such, clinicians should do their best to be sensitive to the patient's cultural or ethnic backgrounds, and when needed, clinicians should educate themselves on the cultural backgrounds of their patients. In fact, pathologizing cultural and racial differences in symptom expression is thought to be the mechanism of overdiagnosis of serious disorders in some cultures and underdiagnosis of serious disorders in others (Suite, LaBril, Primm, & Harrison-Ross, 2007). Many international studies have reported that White patients are more often diagnosed with mood disorders, whereas African-American, Afro-Caribbean, and Latina patients are more frequently diagnosed with schizophrenia (Snowden & Cheung, 1990; Suite et al., 2007). Remember to keep in mind how race, gender, ethnicity, and culture influence one's beliefs about what is normal/abnormal or functional/dysfunctional and how these factors influence clinical interpretations.

Cultural differences may not only affect the clinician's perception, but can also influence how patients recognize, characterize, and describe their psychological symptoms (Neighbors et al., 1992; Sue & Sue, 2007). For example, Asian and African-American patients report a greater number of somatic symptoms compared to White patients (Lin & Cheung, 1999; Swartz, Landerman, George, Blazer, & Escobar, 1991). In some cultures, it is more acceptable to report physical symptoms than emotional distress; as such, psychological distress may be more commonly expressed as physical symptoms in these cultures (Lin & Cheung, 1999). Clinicians should also consider how culture impacts the trust or mistrust of healthcare systems. Specifically, minority patients utilize healthcare and mental healthcare systems less than White patients, and this difference has been attributed to minority patient's mistrust of the healthcare system (Suite et al., 2007; Whaley, 2001).

Clinicians should also be aware of how a patient's cultural experiences might affect his or her verbal and nonverbal interactions, including the tendency to be relatively passive in the interview or not make much eye contact which should not be viewed as a sign of pathology if the behaviors are consistent with patient's cultural scripts. In addition, patients from a markedly different cultural background than the clinician may report information and experiences that could be foreign to the therapist, and the therapist may unintentionally react in a way that detracts from rapport building (e.g., looks surprised). When cultural or ethnic differences between patient and clinician arise during the course of the interview, it is helpful to acknowledge the differences and work collaboratively to not make differences become barriers. Failure to acknowledge important differences can interfere with the development of the working alliance. Clinicians desiring more information about diversity issues in interviewing and psychotherapy should be aware that several excellent resources are now available (Aponte & Wohl, 2000; Clark, Anderson, Clark, & Williams, 1999; Neighbors & Jackson, 1996; Sue & Sue, 2007).

7.4.12 Diagnosis and Differential Diagnosis

While it is expected that beginning clinicians generate basic diagnostic questions and formulate a tentative diagnosis, it requires a more advanced skill to more fully appreciate the

complexity of psychiatric diagnosis and the process of differential diagnosis. There are a number of important benefits conferred by an accurate psychiatric diagnosis (Segal & Coolidge, 2001). First, diagnosis facilitates communication among professionals. Communication is enhanced when professionals share an understanding of disorders and their symptoms, in essence sharing a common language. For example, a clinician may state that a person has paranoid schizophrenia. Other professionals who are familiar with this diagnosis understand that this person may experience persecutory delusions, auditory hallucinations, as well as disorganized speech, catatonic behavior, and flat affect (APA, 2000).

Second, knowledge of disorders and symptoms helps clinicians organize their diagnostic thinking, essentially helping them to more effectively evaluate potential diagnoses that a patient may have. For example, if a patient presents with frequent crying spells, feelings of worthlessness, and overeating, a clinician may probe about the presence or absence of other symptoms of major depression (e.g., anhedonia, sleep disturbance, concentration problems, lethargy, suicidal impulses) to confirm or rule out the diagnosis.

Third, diagnosis plays an important role in the interface of clinical psychology with the legal arena. For example, mental health professionals are sometimes called to testify about a defendant's competence to stand trial or whether a mental disorder has impaired a defendant's judgment. In some cases, a diagnosis can help a severely mentally ill person who has committed a crime to be placed in a mental health facility instead of a prison. Also, neuropsychological evaluations are often conducted to determine the competency or ability of a person to make medical and financial decisions.

A fourth benefit of diagnosis is that, in many cases, it helps to determine appropriate treatments. Similar to the medical model in which a diagnosis of strep throat implies the known and successful treatment by a course of antibiotic medications, diagnosis in mental health can influence the type of psychotherapy or medication to be provided. There are now empirically supported psychotherapeutic interventions and processes for many specific psychiatric diagnoses (e.g., Castonguay & Beutler, 2005). For example, efficacious treatments for major depressions include cognitive therapy, behavior therapy, and interpersonal therapy, and these types of psychotherapeutic interventions as well as pharmacological interventions are frequently selected based on the formal diagnosis of the patient.

A fifth benefit of diagnosis is that it allows clinicians to bill for, and receive payment by, third-party payers (e.g., insurance companies) for the clinician's service. Typically, insurance companies require a diagnosis of insured persons before they will pay for evaluation or treatment. Finally, a sixth benefit of diagnosis is that it can be used to enhance research about the etiology, natural course, and treatments of mental disorders. Research on mental disorders would be impossible if people with the same diagnosis could not be accurately grouped together for study.

Differential diagnosis refers to the systematic way of discriminating among numerous possible disorders to identify specific ones for which the patient meets the diagnostic threshold. To be effective at the process of differential diagnosis, clinicians must have extensive working knowledge of the diagnostic criteria for the vast majority of mental disorders so that subtle distinctions between disorders can be evaluated in an interview. The text of the *DSM-IV-TR* provides information about how to discriminate similar mental disorders from each other. It also provides in the appendices decision trees and flow charts to aid in the process of differential diagnosis.

7.4.13 Clinical Formulation

Developing and honing a clinical formulation is one of the most challenging aspects of the interview. It can be difficult because patients' problems are often complex with many contributing factors. Throughout the interview, the clinician should be developing and testing hypotheses regarding differential diagnoses. Once the interview is complete, it is often helpful to list the most salient working hypotheses or preliminary diagnoses. Although most experienced clinicians assume they know the diagnostic criteria for a particular disorder, Aklin and Turner (2006) point out the high rates of misdiagnosis due to inadequate use of diagnostic criteria. Therefore, this list should include diagnoses that are probable and those that are possible. Next, the clinician should review all information obtained from the interview, including responses to questions, as well as observations and presentation of the patient.

In the clinical formulation, biological, psychological, and social/cultural contributors to the patient's symptoms or problems should also be reviewed. Biological factors include genetics, family medical or psychiatric history, prenatal development, or other general medical condition impacting patients' functioning. Psychological factors can include early childhood experiences, interpersonal processes, moods, irrational beliefs, or learned behaviors that are causing or maintaining the patient's symptoms. Social and cultural factors include current stressors, family environment, and consideration of the differences in expression of distress, such as reported somatic versus psychological symptoms (Aklin & Turner, 2006). Finally, the clinical formulation should also address patients' assets including their educational background, employment history, interests, skills, and abilities. This information will be important for patient treatment planning.

7.5   Summary

Although being a good clinical interviewer takes guidance and practice, the novice clinician should remember that the clinical interview at its core is a *meeting*, and we have all had this type of interaction. Remember the essentials of a clinical interview are confidentiality, professionalism, and preparedness. These qualities will assist in developing rapport with the patient, which will in turn assist in gaining a more thorough understanding of the patient's presenting problem and assist the clinician in diagnosis and treatment planning.

In the *basic competencies* section, we reviewed the fundamentals of interviewing, such as opening the interview, observing the patient, facilitating the narrative, and ending the interview. In the *expert competencies* section, we reviewed the more advanced aspects of interviewing, such as timing of interpretations, using confrontational statements, dealing with difficult patients, appreciating diversity, making differential diagnoses, and generating a clinical formulation. Where applicable, we also offered strategies and examples to assist in the clinicians' understanding of how to handle various situations. Through reading and practicing the competencies laid out in this chapter, we hope that both the novice and the more sophisticated clinical interviewer will gain ideas and ways to advance their skills. We also believe and hope that as existing models of competencies in clinical psychology (e.g., Hatcher & Lassiter, 2007; Kaslow et al., 2007; Rodolfa et al., 2005) are refined and more widely applied, training in professional psychology will be enhanced.

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8 Clinical Interviewing with Children

J. Christopher Young · Julie A. Davidson · Alan M. Gross

Abstract: The aim of this chapter was to provide a comprehensive overview of clinical interviewing with children. The chapter details the basic clinician competencies essential for obtaining the requisite breadth and depth of necessary information for case conceptualization, diagnosis, and responding to the referral. Clinicians must possess an extensive knowledge of developmental trajectories and symptoms of psychopathologies and medical disorders commonly observed in children. Clinicians must also be prepared to recognize and address a range of cultural influences that include language barriers, acculturation, the involvement of the family, and additional factors that influence information provided by the child and family members. APA and DSM-IV-TR guidelines for cultural formulation and practice are discussed. Review and suggestions for employing developmentally appropriate language and question format are also examined. Last, considerations and methods for obtaining additional information from parents and teachers are reviewed. Following examination of these core skills, the chapter explores and outlines the administration of an effective interview. Suggestions are provided in the selection of interviewing format and instruments, discussing and establishing the bounds of confidentiality, and cultivation of rapport. Another section of the chapter highlights a group of expert competencies that clinicians who frequently work with children should possess. Strategies for interviewing children who are hesitant or opposed to participating in the interview are offered. The assessment of suicide risk and allegations of maltreatment and various forms of abuse (i.e., sexual, physical, verbal) are also examined in the expert competencies section. Last, factors and considerations associated with forensic interviewing are provided. The chapter concludes with suggestions for obtaining didactic and applied clinical experiences necessary for competent clinical practice.

8.1 Overview

The clinical interview is an essential tool in the provision of efficacious services and one that transcends specific areas of mental health services. The clinical interview is the process by which information is obtained about the client through direct communication with the client and relevant caregivers (Craig, 1989). The aims of the clinical interview are multifaceted and are often guided by the referral question or presenting problem. The information may be used for diagnosis, determination of appropriate services, and treatment planning (Aklin & Turner, 2006; Craig; Othmer & Othmer, 2002). In general, interviews include rapport building, mental status evaluation, historical or background information gathering, and identification of cultural considerations. When interviewing children, the clinician is presented with additional considerations that are unique to this group. Interviewing of parents and teachers, determining environmental contingencies (as related to problem behavior) as well as developmental

and family history additionally warrant consideration (Boggs, Griffin, & Gross, 2003; Logan, 1989). The clinical interview represents a method of acquiring extensive information in a brief period that will prominently influence diagnosis, case conceptualization, and treatment planning.

Research indicates that clinicians misjudge their clinical skills and may not readily agree with one another regarding diagnosis (Aklin & Turner, 2006; Miller, 2001; Miller, Dasher, Collins, Griffiths, & Brown, 2001). While disparate interpretations may be attributable to clinicians' varying consideration of cultural factors (Aklin & Turner; Garb, 1997) or variability in the information provided by the client, inconsistencies may also be attributed to the clinicians' professional competence related to the art of interviewing (Miller; Miller et al., 2001). Professional competence is a crucial issue in the practice of psychology and reflects both specific and broad abilities that are cultivated across one's career (Kaslow et al., 2007; Leigh, 2007).

Psychologists have attempted to specify needed competencies in the practice of the general psychological assessment (Krishnamurthy et al., 2004), yet the more specific tool of clinical interviewing has not received the same attention. It is clear that the clinician must cultivate skills in several core areas in order to effectively utilize the interviewing process, and the interviewing of children demands additional competencies unique to this group. The clinician must develop a working knowledge of the pros and cons associated with specific interviewing styles and formats, types of questions, interviewing environment, and circumstances that initiate the request for the clinical interview (Sommers-Flanagan & Sommers-Flanagan, 2002). The clinician must also have extensive knowledge of developmental trajectories, developmental disorders, and potential multicultural influences for accurate appraisal of symptom presentation (Aklin & Turner, 2006; Sharp, Reeves, & Gross, 2006). Last, clinicians should also consider how their own behaviors, beliefs, and biases influence interactions with the child and his or her family, the types of questions asked, and how symptoms are interpreted (Sommers-Flanagan & Sommers-Flanagan).

The principal goal of the clinical interview is the acquisition of information necessary for case conceptualization, diagnosis, and responding to the referral. This process of obtaining information is achieved primarily through discussion with the child and his or her parents. While these discussions may appear straightforward, obtaining accurate and quality information is often elusive and complicated by a number of factors. The purpose of this chapter is to delineate the skills necessary for competent application of this tool. Within basic competencies, this chapter will first review the requisite knowledge needed of the developmental process, diagnosis of developmental disorders and child psychopathology, and cultural factors. This will be followed by a description of effective communication with the child, parents, and teachers. The "Basic Competencies" section will concisely examine the components of the actual interview. Rapport building, negotiating concerns and discussions of confidentiality, interview structure, and interview content will be individually examined. Collectively, these areas of knowledge and skill represent the core proficiencies needed to competently perform the clinical interview with a child. Following an examination of basic competency skills, a review of additional factors and potential difficulties faced by clinicians when interviewing children and adolescents will be presented. The chapter will also outline a process for obtaining the necessary training and skills for competent practice.

8.2   Basic Competencies

8.2.1   Developmental Considerations

For optimal success in meeting goals of the interview (i.e., obtaining information related to possible diagnosis, assessment of factors maintaining problematic behavior, and treatment planning; Sharp et al., 2006) the child should be placed within the appropriate developmental context. Children grow and change rapidly. Clinicians who work with children must be aware of the normal progression of childhood development in order to quickly adjust the interview to the child's level. Knowledge of development will also guide selection of topic areas covered in the interview (Monaco, Rayfield, & Geffken, 1997).

Major areas of development include motor (i.e., fine-motor, gross-motor, and visual-motor integration), communication (i.e., verbal and nonverbal), cognitive ability (i.e., verbal and nonverbal reasoning, memory, executive functioning, general fund of knowledge), adaptive (e.g., feeding self, brushing teeth, toileting), and social (e.g., coping with stress, play behavior) skills (Morrison & Anders, 1999; Sparrow, Cicchetti, & Balla, 2005). For each area, the mean age at which skills are mastered by most children has been delineated. Additionally, the developmental trajectory of each domain extends beyond childhood through adolescence. For example, in the area of communication, most children can point to two to three body parts at 18 months, use two-word sentences at about 24 months, and can have a conversation at about 48 months. During late childhood and early adolescence, communication skills continue to evolve as children develop the ability to convey verbally complex ideas, as well as to use and to understand abstract expressions (e.g., metaphors, analogies, euphemisms). These examples use the mean age at which skills are typically observed, but a "normal range" for each skill is also empirically defined. The range of any developmental skill, however, is relatively large (Holmbeck, Greenley, & Franks, 2003). It is important that the clinicians understand that maturation and development do not occur in a systematic manner but rather appear as fluid transitions as new and more advanced skills and abilities are acquired (Morrison & Anders).

However, clinicians' knowledge of the age range for only major developmental milestones may not be sufficient. Other less commonly discussed behaviors may remain unnoticed by clinicians unaware of their significance. For instance, various behaviors may be indicative of a problem at one developmental level but may be normative at another. Typically developing children walk on their tiptoes around 7 months of age. However, the same behaviors exhibited in a 3-year-old may be a red flag to clinicians aware of their significance, as walking on tiptoes could indicate the presence of a Pervasive Developmental Delay.

Clinicians must also consider potential environmental influences that may prominently impact a child's developmental process (Morrison & Anders, 1999). Environmental insults can include dietary needs not being met (Morrison & Anders) and exposure to noxious chemicals (e.g., lead, mercury, harmful gases, household cleaners; Woodruff et al., 2004), as well as physical and sexual abuse and neglect (Wise, Wilder, & Brodhagen, 2007). Exposures to environmental threats often present in an array of behavioral manifestations and developmental delays. These include delays in meeting developmental milestones, loss of previously obtained abilities, behavioral problems, and poor regulation of emotions. It is quite possible that the child or adolescent is not currently being exposed to such dangers. However, given their pervasive effects, the clinician must be aware of the classic symptoms associated with these environmental threats.

Standardized measures of developmental age are available which provide an age equivalent for each major area of development based on skills mastered. The age equivalent is referred to as "developmental age." Developmental age differs from chronological age in that it takes into account the skills mastered by the individual child regardless of the child's age in years. Several developmental age assessments include the Developmental Profile 3 (DP-3; Alpern, 2007), Battelle Developmental Inventory, Second Edition (BDI-II; Newborg, 2005), Child Developmental Inventory (CDI; Ireton, 1992), and Vineland Adaptive Behavior Scales, Second Edition (Vineland-II; Sparrow et al., 2005). These are norm-based measures which will determine if developmental delays exist. They may be used as an adjunct to the child clinical interview. However, administration times range from approximately 30 min (e.g., DP-3) to 1 h or more (e.g., BDI-II). Because of the time-consuming nature of standardized assessment, clinicians who work with children should be familiar with typical development in order to quickly estimate the child's level of functioning from the interview. From this, clinicians may determine if a more formal assessment of development is warranted.

The ability to contextualize child behavior is also essential to interviewing competence because some referrals may be the result of inappropriate parental expectations for their children. Parent education may be particularly useful for parents who have had little exposure to other children. These parents may lack a frame of reference by which to judge the behavior of their child. Clinicians may need to simply alleviate parent anxieties when expectations of the child are beyond what would be developmentally appropriate. On the other hand, some parents may be unaware that their child exhibits developmental delays. These parents may benefit from a discussion of typical development and the importance of early intervention to address delays.

There are a range of ways in which a clinician may become more familiar with developmental norms. While the *Diagnostic and Statistic Manual of Mental Disorders, Fourth Edition, Text Revision* (DSM-IV-TR; American Psychiatric Association, 2000) is an excellent tool for determining abnormal development, it does not provide a comprehensive outline of typical development (Jayne, Bethay, & Gross, 2007). Competencies associated with chronological age, or the child's age in years, may be obtained from various developmental norm charts. Clinicians may use a chart as a starting point from which to approximate competencies typical of a child the same age as the client. Charts can vary somewhat, however, and clinicians should use those that are empirically validated and reliable.

While developmental norm charts are excellent tools for clinicians they are no match for observing and interacting with many "typical" children. To this end, it is advantageous for clinicians to observe groups of same-age children (Boggs et al., 2003). Indeed, obtaining an "average" picture of age-appropriate behavior is invaluable. After observing many children, clinicians may better determine what behaviors are within the realm of normal development and what behaviors warrant further investigation. Clinicians could, for instance, become more familiar with 5-year-old children by informal observation of a kindergarten class. Subsequently, the clinician may synthesize a composite, or prototype, of average 5-year-old behavior in a structured social environment.

In sum, knowledge of childhood development is an essential clinical skill. With this knowledge, the clinician has the foundation to appraise the child's acquired skills and those yet to be mastered (Boggs et al., 2003; Monaco et al., 1997). Resultantly, the clinician is better able to distinguish needed information, decrease the likelihood of misdiagnosis, and effectively answer the referral.

8.2.2 Diagnosis of Developmental Disorders and Child Psychopathology

The diagnosis of children is quite different from that of adults. Since children are moving targets who perpetually develop and change, clinicians must consider the child's developmental level to assess if functioning is abnormal. Further, symptoms frequently overlap diagnostic classifications, and disorders found in both adults and children may vary in symptom presentation (Jayne et al., 2007; Morrison & Anders, 1999). Research indicates that an interviewer is most efficient when he or she prepares for the interview, on a case-by-case basis, by reviewing and becoming familiar with information related to the referral question (Monaco et al., 1997). This preparation should include review from several different sources.

A review of symptomology and diagnostic criteria associated with the referral question is often the first step. It is important that the clinician recognize that frequently symptoms are not specific to one disorder (Morrison & Anders, 1999). As such, the clinician should more broadly review disorders associated with the symptoms described in the referral. For example, symptoms associated with Oppositional Defiant Disorder (ODD) and Attention-Deficit/ Hyperactivity Disorder (ADHD) are quite similar (Waldman & Lilienfeld, 1991), yet the clinician must be able to differentiate the two disorders. Further, diagnostic criteria found in the DSM-IV-TR (APA, 2000) reflect the most current description of symptoms associated with a particular disorder. Criteria change and are refined across editions. As such, the clinician must be versed in the most current diagnostic criteria (Morrison & Anders).

The clinician should also review disorders that are most frequently diagnosed within the age range of the child. The most common diagnoses of a child under age 3 are much different from those typically made in later childhood or adolescence (Morrison & Anders, 1999). Through review of disorders common to the child's age, the clinician can better identify areas to cover in the interview and obtain information necessary to differentiate between diagnoses.

Knowledge of cognitive and behavioral symptoms associated with genetic and medical disorders is essential. Genetic anomalies and medical illness or injury can have profound effects on a child's development. For example, mental retardation (MR) is a frequently encountered developmental disability, yet over 1,000 genetic causes have been identified (Walker & Johnson, 2006). Similarly, traumatic brain injury in a child may be associated with symptoms of inattention, poor impulse control, and personality changes (Hooper et al., 2004). The clinician should acquire a medical history in conjunction with the evaluation to aid in understanding the etiology and progression of symptomology. However, the competent clinician may also at times identify constellations of symptoms congruent with a genetic disorder or medical condition not previously identified.

Gender represents another important consideration in understanding disorders of childhood and adolescence. Significant sex differences in the prevalence of psychopathology have been identified. Most often, males demonstrate externalizing problems rather than internalizing problems when they experience maladjustment. That is, males exhibit behaviors consistent with ADHD, ODD, and conduct disorder. Females, in contrast, are more likely to experience internalizing problems such as anxiety, depression, or eating disorders when maladjustment occurs (Crick & Zahn-Waxler, 2003; Hayward & Sanborn, 2002). It is reported that these sex differences emerge around adolescence and remain consistent throughout the life span. However, in children younger than 4 years of age, males and females tend to display similar rates of physical aggression, level of activity, and difficult temperament (Crick & Zahn-Waxler).

The clinician will benefit from considering gender throughout the interview process from preparation (e.g., selection of interview format, questions) through interpretation of data collected.

In sum, a primary goal of clinical interviewing is the provision of an accurate and discriminating diagnosis. In order to provide this, the clinician must be knowledgeable in disorders that develop in childhood and adolescence (Monaco et al., 1997). The clinician must not focus exclusively on problem behaviors and related symptoms, but also on aspects of etiology and pathogenesis. When making diagnostic determinations, it is imperative that the clinician consider onset, severity, and pervasiveness of symptoms (Lord, Cook, Leventhal, & Amaral, 2000). The clinician must be also aware of how disorders may present with differing constellations of symptoms depending on the age, gender, and developmental level of the child (Monaco et al.). Lastly, the clinician must recognize the limitations of diagnostic criteria and classifications when interpreting each child's unique constellation of symptoms.

8.2.3 Cultural Considerations

An understanding of the influence of culture is essential to understanding a client's symptom presentation, interpersonal interactions, and psychosocial environment. More importantly, successful interviewing depends on the clinician's ability to apply this knowledge to minimize cultural barriers and facilitate informative dialogue. Despite the recognition of the importance of an individual's ethnic culture, clinicians are often inadequately trained in how to understand, account for, and integrate cultural factors into the assessment/treatment process (Turner, Hersen, & Heiser, 2003). In addition to ethnicity, cultural identity may also be defined within gender, age, and socioeconomic status (Aklin & Turner, 2006; Garb, 1997).

In response to the need for more culturally competent practice, the American Psychological Association (APA, 2003) developed guidelines for multicultural training, research, and practice. The DSM-IV-TR (APA, 2000) provided an outline for the integration of culture in case conceptualization and diagnosis. In general, culturally competent interviewing should include gaining an appreciation of the client's cultural background, acculturation, and language barriers; and an awareness of personal biases or prejudices held by the clinician. Competent interviewing requires careful consideration of these issues as they will influence the manner in which the interview is structured and the interviewing measures chosen. These considerations are also important for accurate interpretation of symptom presentation within the framework of the child's culture (Aklin & Turner, 2006; Fuertes, Mislowack, & Mintz, 2005; Johnson & Tucker, 2008; Paniagua, 2001).

8.2.3.1 Cultural Influences on the Interview Process

Prior to the clinical interview, clinicians should evaluate whether any personal beliefs or biases specific to the client's culture may affect their ability to provide competent services. Possession of biases and stereotypes does not negate the clinician's ability to provide efficacious services, but clinicians should be aware of these and evaluate whether they may impede their ability to provide appropriate and adequate services (APA, 2003; Fuertes et al., 2005; Johnson & Tucker, 2008).

The clinician should consider the cultural context of the child when considering how to structure the interview process. Many cultures are collectivist (i.e., individuals consider themselves relative to the larger systems of family, community, society, and the world) and the family

will expect to be intimately involved in the entire therapeutic process (Johnson & Tucker, 2008; Tseng, 2003). Further, many cultures have strong attitudes regarding the use of mental health services and may be reluctant to discuss problems outside the family (Grieger & Ponterotto, 1995; Johnson & Tucker). To best prepare the child and family, the clinician should explain the interview process and offer to answer any questions (Johnson & Tucker). In particular, the clinician should explain that the interview may include personal or intimate questions, and the purpose of such questions is not to insult or embarrass the family but to help the clinician develop an understanding of the child's difficulties and their environment (Johnson & Tucker).

In addition to the aforementioned considerations, interviewing competence requires clinicians to identify any language barriers prior to the interview. The need for an interpreter presents the clinician with an array of new hurdles. Not only does an appropriate interpreter need to be found, but clinicians must also be cognizant of the potential for significant interview content translation problems. For example, accurate information and meaning, as well as clinically relevant context, may be lost in the translation process (Tseng, 2003). Clients may also bring a family member to serve as interpreter in the interview, which may result in the family member offering interpretations of the client's dialogue rather than offering an objective translation. Additionally, attention must be paid to addressing the potential for the family member not respecting confidentiality and the crossing boundaries within the family system (APA, 2003; Tseng). When possible it is best to contract a professional interpreter with mental health training to minimize these issues (APA; Johnson & Tucker, 2008; Tseng).

In addition to consideration of verbal dialogue, clinicians must consider cultural differences in nonverbal behavior and communication style. These may include direct versus indirect communication, the degree of context that must be inferred from what is stated, and whether it is culturally appropriate to talk about the family or family members. Consideration of these more subtle communication differences can have significant influence on both the clinician's ability to cultivate rapport and to accurately interpret what is being said by the client and his or her family (Aklin & Turner, 2006; Johnson & Tucker, 2008).

The constellation of symptoms with which a client presents is influenced by his or her environment both within the family and in the larger culture. Input from the family is an important component of the clinical interview with any child, but especially with children who are members of a cultural minority. Family members can provide information about cultural values and beliefs and whether behaviors and psychological symptoms are acceptable and normative within the culture (Johnson & Tucker, 2008; Tseng, 2003). However, involvement of family members may come at a price. Specifically, children may be hesitant to disclose information to the clinician because of perceived cultural disapproval regarding discussion of the family and its members (Johnson & Tucker; Tseng). When interviewing a child from a cultural minority, it is the task of the clinician to discriminate psychological distress from culturally specific behaviors that may be common or adaptive. Then the clinician can better identify the role of culture on the presenting problems (Roysircar, 2005).

8.2.3.2 Acculturation

During the interview the clinician needs also to assess the client's level of acculturation. Acculturation describes the transitional process by which individuals experience challenges and changes in their values, beliefs, and behaviors through exposure to, and involvement with,

a culture other than their own (Casas & Pytluk, 1995; Johnson & Tucker, 2008). Acculturation is commonly conceptualized along a continuum (Johnson & Tucker; Phinney, 1990). That is, an individual may feel rejection toward his or her new or old culture on one end of the spectrum, or may have successfully cultivated the ability to function effectively in either culture on the other end. Alternatively, some clinicians conceptualize acculturation as multidimensional or orthogonal in which the individual's identification with each culture is independent of the other (Costigan & Su, 2004; Phinney).

The acculturation process is not unique to immigrant and refugee groups but is also experienced by individuals who transition between cultures, usually from a majority group to a minority group. The acculturation process is influenced by the values, beliefs, customs, and behaviors that differ between cultures as well as a number of additional variables. These include: strength of identification with culture of origin, language barriers, and level and nature of contact with the other culture (Casas & Pytluk, 1995; Johnson & Tucker, 2008). As a result of this transition process, many individuals and families experience acculturative stress. This stress is often manifested as both psychological distress (e.g., symptoms of depression, anxiety, somatization and anger) and behavioral difficulties (e.g., school and work problems, substance abuse, interpersonal conflict). Complicating this transition for the child is that family members often move through the acculturation process at different rates depending on age, language proficiency, and level of contact with the new culture. As such, assessment of the client's level of acculturation may provide valuable insight into the influence of culture on the child's psychosocial functioning, as well as its potential influence on familial interactions (Johnson & Tucker).

8.2.3.3 Cultural Formulation and Diagnosis

There is significant evidence that minorities are frequently misdiagnosed, overdiagnosed, and underdiagnosed depending on group membership (Aklin & Turner, 2006). Consideration of the aforementioned factors (e.g., clinician's self-appraisal of cultural beliefs and biases, communication styles, language barriers, and interviewing methodology) may serve to minimize these errors (Aklin & Turner; Fuertes et al., 2005; Johnson & Tucker, 2008; Tseng, 2003). Clinicians may also integrate the cultural formulation methodology provided in the DSM-IV-TR for more accurate diagnostic assessment (APA, 2000). The methodology uses information obtained in the interview, observation, and review of records to describe the following five domains: *cultural identity of the individual, cultural explanations of the individual's illness, cultural factors related to psychosocial environment and levels of functioning, cultural elements of the relationship between the individual and clinician, and overall cultural assessment for diagnosis and care* (APA, 2000). Integration of a culturally competent interview with the use of cultural formulation methodology should ensure that the clinician develops a well-informed case conceptualization, diagnostic impression, and foundation for treatment planning.

8.2.4 Language Considerations

The interviewing process and social climate of the clinician's interactions with the child are dictated by an array of factors that are both within and outside the clinician's influence. While

it is beneficial to gain background information regarding the child's presenting problems, interpersonal skills, and attitude toward the appointment with the clinician (Monaco et al., 1997), the use of developmentally appropriate language and the format of question presentation are valuable techniques that the clinician must consider and employ in order to facilitate dialogue with the child, and improve the quality and accuracy of the information provided by the child (Monaco et al.).

8.2.4.1 Developmentally Appropriate Language

The manner in which the clinician talks with the child should depend largely on the child's age and developmental level (Monaco et al., 1997). Knowledge or assessment of the child's language abilities will influence the complexity of questions and the manner in which they are presented. Age and developmental level should not be assumed to be equivalent and it is imperative that the clinician consider the child's cognitive and emotional level of functioning to be of greater importance than raw age (Monaco et al.; Salmon, Roncolato, & Gleitzman, 2003). For example, younger children are likely to be concrete in their interpretation of questions and provision of response. As such, the clinician would want to be conscious to use language that effectively conveys to the child what information is sought. Children referred with specific diagnoses may also influence the clinician's language. Interviewing a child with MR is an example of a disorder in which the clinician must be mindful to ask questions that are within the child's ability to answer, but not too basic so as to offend the child or parent (Morrison & Anders, 1999).

Language development has a prominent effect on the quantity of information reported (Salmon et al., 2003). To address potential language limitations associated with younger children, several researchers have found that activities that require active participation from the child (e.g., drawing, re-enactment) may improve the quality of interview question responses (Parkinson, 2001; Salmon et al.). Adolescent's cognitive and emotional development provides improved abstract reasoning and identification of feelings, motives, and behaviors (Monaco et al., 1997). Resultantly, older children and adolescents can be expected to provide greater depth and accuracy in their responses (Hayes & Delemothe, 1997).

In addition to limitations related to development, the clinician will also encounter children with varying speech and language disorders (e.g., speech impediments, auditory processing disorder, Tourette's disorder, selective mutism). Such language disturbances may limit the quality of the responses and the child's ability to understand what is being asked. Further, many children who are aware of their communication difficulties may be hesitant to talk with the clinician. The clinician should consider that the child's hesitancy to disclose may serve as a defense and may be attributable to the past negative reactions of others, discomfort talking with the clinician (e.g., new person), and/or the novel setting (Ford, Sladeczek, Carlson, Kratochwill, 1998; Morrison & Anders, 1999). The clinician should carefully observe these displayed communication difficulties as these likely provide important information in understanding the child's psychosocial profile. As important as these observations are, the clinician should still attempt to engage the child in the interview process. Use of different settings, having the parent in the room, and using play (e.g., games, drawing) may lessen the child's anxiety and aid in the initiation of dialogue (Ford et al., 1998; Morrison & Anders).

8.2.4.2 Question Format

The format in which questions are presented to the child powerfully influences the accuracy and quality of information that is obtained. Interviewing format used with children is a common area of research and debate in the forensic setting as the child is often primarily responsible for testimony related to trauma or abuse (Hayes & Delemothe, 1997; Peterson & Biggs, 1997). Both open-ended and close-ended questions will be employed in most interviews, but the degree that each is used depends on factors such as age, language development, social skills, and amount of information that the clinician has prior to the interview (Morrison & Anders, 1999; Peterson & Biggs, 1997; Powell & Lancaster, 2003).

Open-ended questions are preferable since they offer less suggestion of what may be perceived as the desired response, are indicative of what information the child feels is important, provide insight into the child's linguistic and intellectual abilities, and allow for observation of the child's behavior during responding. However, children, particularly younger children, often provide brief and less descriptive information in response to an open-ended question (Hayes & Delemothe, 1997; Monaco et al., 1997; Peterson & Biggs, 1997; Powell & Lancaster, 2003).

Close-ended questions, questions with specific response options (e.g., yes–no; who, what, where questions), or questions constructed to cue recall, may be misleading, are more vulnerable to inaccuracies or confabulation, and suggest that the clinician is the one who knows what information is important (Hayes & Delemothe, 1997; Peterson & Biggs, 1997; Powell & Lancaster, 2003). Further, when presented close-ended questions in a yes–no format, children are more likely to provide an answer even if they do not know the answer as compared to adults who are likely to report not knowing the answer (Waterman, Blades, & Spencer, 2001). "Why" questions are not often useful since they may be viewed as accusatory, children may feel pressure to rationalize their behaviors, and they may have little insight into "why" they behaved in a particular way (Monaco et al., 1997). Despite these limitations, close-ended questions are often needed to obtain information with the necessary depth and breadth, particularly when interviewing younger children and those with limited language abilities.

8.2.5 Interviewing Parents and Teachers

In addition to interviewing the child as part of the child clinical interview, clinicians may call upon parents, teachers, and others (e.g., bus drivers, religious leaders, physicians) to serve as informants. The use of multiple respondents can result in a more complete picture of the child and corroborate information provided from a single source (Hurwitz, Gaebler, & Kratochwill, 2007; Palmer et al., 2007). Parents are excellent informants about the child's development and duration, frequency, and intensity of symptoms, as well as behavioral and cognitive strengths. Additionally, parents may help the clinician specify target behaviors for treatment (Jayne et al., 2007). However, the clinician should be mindful that parents may exaggerate symptoms or, alternatively, minimize problems in an effort to manage their own image or the image of the family (Nock, Holmberg, Photos, & Michel, 2007). Teachers also serve as important informants due to their ability to observe the child function in academic and social situations. This perspective is unique from the parents', as teachers are able to easily reference the child's behavior relative to the functioning of his or her peers (Wise et al., 2007). Teachers may also be more objective informants of the child's functioning (Monaco et al., 1997).

Dawson (2005) suggested several interviewing steps useful for successful completion of parent or teacher interviews. Similar to the child interview, clinicians are advised to establish rapport with informants and use open-ended questions in the interview. Parents and teachers may also be anxious about talking with the clinician and hesitant to report problems for fear of being blamed for the child's behavior or mood difficulties. Thus, clinicians should display empathy and warmth towards these informants in an effort to diminish these reservations (Hurwitz et al., 2007). Clinicians should also provide guidance for parents and teachers to help them identify primary concerns in objective behavioral terms. Equipped with a clearly defined behavioral definition of behaviors targeted for change, clinicians can work to hypothesize environmental factors that may bring about and maintain problematic behavior patterns (Dawson).

Clinicians should gather information from parents regarding the child's birth (e.g., complications, length of hospital stay), mastery of developmental milestones, family and social environment, and approximate cognitive functioning (Boggs et al., 2003). When appropriate, information can be gathered on questionnaires. Parent packets may include the developmental questionnaire, as well as relevant behavioral rating scales (e.g., Child Behavior Checklist, Achenbach, 1991a; Gilliam Autism Rating Scale – Second Edition, Gilliam, 2006; Conners' Rating Scales – Revised, Conners, 1997). Additionally, many of these rating scales have versions that were developed for teachers (e.g., Teacher Report Form, Achenbach, 1991b; Conners' Rating Scales – Revised, Conners).

Behavior rating scales are excellent tools with which to gather information. They typically include age norms which help determine symptom severity and degree of atypicality of the behavior of concern. Obtaining information on rating scales and questionnaires aids in gathering objective information that will be used to conceptualize the case, aid in diagnostic decisions, and inform recommendations (Merrell, 2000; Villa & Reitman, 2007). However, clinicians should be aware that not all parents are able to complete handwritten forms at home. It is also important to be mindful of the limited time that teachers will be able to provide when selecting the interview and rating scales (Hurwitz et al., 2007). Professional judgment should be used to determine the best manner in which to obtain information. When it is possible to have questionnaires and measures in hand prior to an interview, the clinician may review the measure with the parent or the teacher in the initial meeting, directing the parent or the teacher to elaborate when necessary. Clinicians should note, however, that self-report measures are used as adjunct to the interview and should not be used as a substitute for a verbal clinical interview.

8.2.6 Components of the Interview

While a thorough knowledge of human development, child psychopathology, and cultural variability is a prerequisite for effective interviewing, competent interviewing relies on the clinician's ability to select and administer the interview in a manner that obtains all necessary information. Similar to the previously examined language and environmental considerations, rapport building with both the child and the parents is vital to making the client comfortable and cultivating open communication. Boundaries and expectations of confidentiality must also be addressed at the outset of the interview. Finally, the interview format and content selected by the clinician can either make answering the referral question and diagnosis straightforward or leave the clinician missing information and unable to make discriminating conclusions.

8.2.6.1 Rapport Building

The interview process is predominantly unidirectional in nature; that is, the clinician asks specific questions of the client. Thus, the formality and structure of the interview can lack the warmth that the client may expect (Craig, 1989). Competent clinicians must be able to cultivate rapport with both the parents and the child. Further, establishing rapport is vital as it influences the quality of the disclosures during the interview and may affect the duration, outcome, and ultimate success of treatment (Monaco et al., 1997; Villa & Reitman, 2007).

Meeting with the parents prior to interviewing the child enables the clinician to inquire about the child's attitude toward the interview, what the child's interests are, and if the child will be able to be interviewed individually. Child clients are usually interviewed because of a referral by another person (e.g., parent, teacher, physician, judge). Typically it is this person, not the child, who deemed it necessary that the child undergo assessment or treatment. The referral may have been made due to any number of behavior problems and the child may have little insight into the impetus for the visit (i.e., referral reason). Thus, the child may feel punished, confused, excited, or anxious when in this situation (Villa & Reitman, 2007). The clinician should also inquire about what the child enjoys or does for recreation as this may provide topics for initiating dialogue or helping to maintain momentum during the interview (Powell & Lancaster, 2003; Villa & Reitman). Finally, the clinician must determine whether rapport would be best cultivated with the parents in the room for any portion of the interview. This decision is based primarily upon the child's age and developmental level (Boggs et al., 2003; Monaco et al., 1997).

The physical environment where the interview will occur is another potent factor in cultivating a warm and comfortable social climate. In particular, the setting may present the clinician with unique challenges since location can vary considerably. Interviews may occur in schools, hospitals, and physician offices, as well as in the clinician's office. Further, the location and reason for the referral may be in response to a crisis. If the interview is to occur in a location in which confidentiality is a concern (e.g., hospital, school), every effort should be made to create a private environment and discuss these limitations with the child and their parent or guardian (Villa & Reitman, 2007). The clinician should determine whether the interview will occur with the parents or the guardian present in the room for the entire interview, a portion of the interview, or whether the parents and the child should be interviewed separately (Boggs et al., 2003; Monaco et al., 1997). Rapport and warm social climate may also be facilitated by allowing younger children to explore the room prior to the interview, sitting on the floor or at tables appropriate for children, and providing age-appropriate toys or drawing materials (Monaco et al.; Villa & Reitman). Conversely, older children and adolescents may view the presence of toys and games unfavorably and will likely prefer to be interviewed in a more mature environment (Villa & Reitman). Regardless of age, the clinician should seek to limit potential distractors, both external and internal, and sit at an angle to the child so as to not suggest to the child that the interview is a test or an interrogation (Villa & Reitman).

Establishing rapport in a clinical interview with a child is quite different than with an adult. It may be necessary to allow the child client more latitude in the interviewing process than is typically provided to an adult client. For example, the clinician may allow the child to move around during the interview. Irwin and Johnson (2005) suggest that the child's preferences be identified before the interview to allow for the clinician to set up the environment in such a way

that facilitates the child's comfort level in the interview. These preferences may include drawing, playing a game, etc. The authors indicate that clinicians should not rely on the same rapport building strategy with each child; rather, clinicians should individualize the interaction based upon the child's preferences. However, it may be accomplished, it is crucial to develop a positive relationship (i.e., build rapport) with the child as soon as possible in order to provide a positive initial experience for the child and to build a foundation upon which treatment can easily follow (Monaco et al., 1997; Sharp et al., 2006).

Responsiveness by the clinician can be displayed both in the way that the clinician allows the child to behave within the interview and the manner in which the clinician responds to disclosures. The type of reinforcement provided by the clinician will likely vary in conjunction with developmental level and age. Younger children may find both primary reinforcers, such as a toy or candy, and verbal praise rewarding, while older kids and adolescents are likely to be responsive to secondary reinforcers, such as verbal praise or social reinforcement (Merrell, 2002; Monaco et al., 1997).

Verbal and nonverbal responsiveness by the clinician are potent factors in the cultivation of rapport and the harvesting of useful information. Verbal responses may be in the form of praising the child's behavior or appearance, and are likely to be more effective when the specific behavior is labeled for the child (Monaco et al., 1997). The clinician may also benefit from the use of nods, "uh-huh," "mmmm," silence, and other forms of active listening to impart to the child that the clinician is interested in what is being said (Monaco et al.; Powell & Lancaster, 2003). Nonverbal cues (i.e., nodding, eye contact) can effectively communicate to the child that the clinician is "attentive and interested" while not interfering or disrupting the child's dialogue (Monaco et al., p. 163). Generally, verbal reinforcement is more effective with the younger child, as the child may not be cognizant of nonverbal cues, while verbal and nonverbal reinforcement is suitable for older children and adolescents (Monaco et al.).

Clinicians new to child clinical interviewing may become more skilled in this regard through review and practice of empirically based strategies provided by published literature. Research indicates clinicians should express respect for the child's opinions, respond in a nonjudgmental manner, avoid giving advice, seat the child at a 90-degree angle to the clinician, and practice active listening (Oetzel & Scherer, 2003; Weersing, Weisz, & Donenberg, 2002). Additional techniques found to contribute to success in rapport building with children across the age range include: use of open-ended questions that are easy for the child to answer (Monaco et al., 1997; Turner et al., 2003), meeting individually with the child (Villa & Reitman, 2007), and identifying and incorporating child-preferred activities into the interview process (Irwin and Johnson, 2005; Powell & Lancaster, 2003).

With younger children in particular, clinicians may find it useful to sit on the floor with the child during the interview. However, it is also indicated that clinicians should behave in a manner consistent with the child's expectations to maximize rapport building. In other words, playing toys with the child may be less effective in cultivating a positive therapeutic relationship than merely talking with the child in a manner that affirms the value of beliefs and experiences (Gurland & Grolnick, 2008). Therapist qualities preferred by adolescents (12–17 years of age) include respect, time shared, and openness as most important in the cultivation of a positive therapeutic alliance (Martin, Romas, Medford, Leffert, & Hatcher, 2006).

Finally, while it is advantageous for the clinician to reinforce appropriate behavior, minor problematic behavior should be ignored. The child client may use behaviors in the interview session that have "worked" with other adults with whom they interact. That is, the child's

behavior may gain him or her access to a desired item, allow him or her to escape or avoid the interview, or may bring about attention from adults. Failure to ignore minor problematic behavior could result in a negative interaction with the child, which could undermine the establishment of rapport.

8.2.6.2 Confidentiality

Confidentiality is often a primary concern of the child client. Children are dependent upon adults, which increases the complexity of clinical interviews with children. Due to the nature of adult–child relationships, children are even more vulnerable than adult clients to the power differential often present between therapist and client.

When conducting a clinical interview with a child, it is imperative that the clinician discusses the potential boundaries of confidentiality and determines what is agreeable to the child and parent (Monaco et al., 1997; Villa & Reitman, 2007). A potential consequence of this discussion could be that the child then withholds information; however, informed consent is the foundation of a trusting relationship. Clinicians must present all information up front to avoid later ruptures to the therapeutic alliance. It is suggested that the clinician discuss confidentiality with the child and parents independently, followed by a discussion with all parties to determine expectations and address and clarify concerns (Villa & Reitman).

Clinicians should also discuss, with both child and parents, what information may be released. Various institutions may request information (e.g., schools, hospitals, insurance companies, courts), but the clinician should consider the referral reason and release only relevant information (Monaco et al., 1997). For example, insurance companies should be provided with necessary minimal information to provide services. Regarding information discussed between the child and the clinician, it is recommended that the therapist, child, and parents discuss the extent to which information will be shared with the parents. The parent or guardian is entitled to the content of the interview. However, caregivers are often willing to provide the child some level of privacy and appreciate that this privacy may aid in the development of rapport between clinician and child. In any event, the clinician must inform the child that disclosures related to plans to harm self or others, engage in potentially dangerous behaviors, and allegations of sexual or physical abuse are grounds for notifying the parent or guardian. Further, after an explanation of such limits of confidentiality, the clinician should inform the child client he or she will be notified in most instances if the clinician deems it necessary to make such a disclosure to parents (Monaco et al.; Villa & Reitman, 2007). If the clinician encounters any ethical or legal dilemmas regarding confidentiality, consultation with a supervisor or colleague (Villa & Reitman), and the APA's ethics code (2002) should be considered.

8.2.6.3 Interview Format

Regarding the structure of the interview, various approaches are loosely grouped into three broad styles: structured, semi-structured, and unstructured. The structured interview describes a formal set of questions, which include optional probes, and areas of inquiry that the clinician will cover with each client. Further, the interview format and order of topics are standardized

and provide the clinician a formal method for rating client responses (Rogers, 1995, 2001). The structured interview also limits the influence of potential interviewer bias (Villa & Retiman, 2007). All structured interviews are designed to enable clinicians to differentiate and diagnose Axis 1 disorders (Nock et al., 2007). The purpose of this systematic interview process is to "maximize the reliability and validity of … the assessment process," but the formality of this process serves as a limitation to the variability that is seen across client presentation (Rogers, 2001, p. 24). Additional limitations of the structured interview are that administration often entails measure-specific training, and interview questions target diagnostic criteria rather than obtaining broad information about the child's functioning. Resultantly, information useful for treatment planning may not be obtained (Villa & Reitman).

The semi-structured interview is quite similar to the structured interview in that there is a standardized set of questions with discretionary probes, but the semi-structured interview also allows the clinician to employ unscripted questions to probe for clarification or additional information (Rogers, 2001). This latitude in the interview process and the clinician's ability to adapt the interview is vital, given the varying constellation of symptoms or histories that are encountered across clients (Aklin & Turner, 2006; Villa & Reitman, 2007). Limitations of the semi-structured interview are questionable reliability and validity (Villa & Reitman).

Specific structured and semi-structured interviews vary in ages and disorders assessed, administration time, as well as the training needed for competent administration (Nock et al., 2007). While examination of each available measure is beyond the scope of the current chapter, an example of the more comprehensive structured and semi-structured interviews will be briefly reviewed. Other frequently utilized structured and semi-structured interviews not reviewed in the current chapter include the Children's Interview for Psychiatric Symptoms (ChIPS; Teare, Fristad, Weller, Weller, & Salmon, 1998), the Composite International Diagnostic Interview – Adolescent Version (CIDI-A; Kessler & Üstün, 2004), the Diagnostic Interview for Children and Adolescents (DICA; Reich, 2000), and the Schedule for Affective Disorders and Schizophrenia for School-Age Children – Present and Lifetime Version (K-SADS-PL; Kaufman et al., 1997).

The National Institute of Mental Health Diagnostic Interview Schedule for Children Version IV (NIMH DISC-IV; Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000) is a structured interview designed to assess approximately 30 disorders in children and adolescents between 6 and 17 years of age. The NIMH DISC-IV utilizes the diagnostic criteria of both the DSM-IV (American Psychiatric Association, 1994) and the ICD-10 (World Health Organization, 1993). There are two versions of the NIMH DISC-IV. The DISC-P is a parent interview for children between 6 and 17 years of age, while the DISC-Y is a self-report interview for youth between 9 and 17 years of age. Three different time frames (i.e., past 4 weeks, past 12 months, lifetime) are assessed in the interview. Generally, symptoms are first evaluated as occurring in the last year. If a symptom is endorsed as occurring in the last year, the symptom is then evaluated in reference to the past 4 weeks (Shaffer et al., 2000). The NIMH DISC-IV contains nearly 3,000 questions, but many of these will not be asked if symptoms are not endorsed or if the lifetime symptoms module is not administered. The NIMH DISC-IV is available in both computer-assisted and paper formats. Additionally, English and Spanish versions are available. Given the structured format and limited response options of the NIMH DISC-IV, this instrument is able to be administered by nonclinicians. Shaffer et al. indicate that the necessary training may be obtained in 2–3 days for the computer-assisted version, with another 2–3 days needed to be adequately trained in the administration of the paper version.

The Child and Adolescent Psychiatric Assessment (CAPA; Angold, Prendergrast, Cox, Harrington, Simonoff, & Rutter, 1995) is a semi-structured interview designed to be administered to children and adolescents between 9 and 17 years of age. The CAPA allows the clinician to select specific modules to administer if the whole interview is not needed. Additionally, the CAPA provides the clinician three levels of probes in order to allow the presence of symptoms to be confidently established or dismissed (Angold & Costello, 2000). The CAPA utilizes the diagnostic criteria of the DSM-IV (APA, 1994), DSM-III-R (American Psychiatric Association, 1987), and the ICD-10 (World Health Organization, 1993) to assess a broad range of disorders. Broad categories of disorders assessed by the CAPA include disruptive behavior disorders (e.g., ADHD, conduct disorder), mood disorders, anxiety disorders, eating disorders, sleep disorders, elimination disorders (e.g., enuresis, encopresis), substance abuse, tic disorders (e.g., Tourette's disorder), and other disorders (e.g., schizophrenia, posttraumatic stress disorder, trichotillomania). Symptoms are evaluated along the dimensions of onset, duration, frequency, and intensity. In addition to diagnostics, the CAPA assesses the child's family, peer, and adult relationships, significant life events, and psychosocial functioning. The CAPA evaluates the presence of symptoms over the preceding 3 months. Parent-report and self-report versions are available, and these versions differ only in that the self-report version does not include questions related to ADHD. Administration time is approximately 1 hr for both the parent-report and self-report versions. With regard to training demands, it is recommended that administrators have at least a bachelor's degree, but no prior clinical training or practice is required. Also, the administrator must obtain certification from a CAPA instructor, which consists of 2–4 weeks of training composed of didactics and practice. Similar to the NIMH DISC-IV, English and Spanish versions are available (Angold & Costello).

The unstructured or open interview is an unscripted process of questioning and inquiry that is specific to each client. This interview has no standardized areas for the clinician to cover and results in informal recording of client responses (Aklin & Turner, 2006; Rogers, 2001). The strength of this process is that it allows the clinician to individualize interviews specific to each client. However, it is not without limitation. Specifically, unstructured interviews may miss vital information, are subject to clinician and theoretical bias, are more vulnerable to measurement errors, have suspect reliability and validity, and can more frequently lead to misdiagnosis compared to other interviewing methods (Aklin & Turner; Rogers; Villa & Reitman, 2007).

Given the uniqueness of each client and his or her specific environment contingencies, it is reasonable to infer that either the structured or unstructured interview used alone will fall short of adequately capturing the necessary information for case conceptualization, diagnosis, and treatment planning. As such, the competent clinician should employ an array of assessment tools drawn from both structured and unstructured interviewing. Further, the semi-structured interview allows the clinician to cover essential content while providing the flexibility to adapt the process to the client's unique cultural presentation (Aklin & Turner, 2006). As such, it is suggested that clinicians employ a structured format to ensure that the requisite data is obtained, but this structure should lack rigidity and be adapted to each client's unique case.

8.2.6.4 Content of the Interview

The content of the clinical interview is guided by several factors. Competent interviewing should result in an accurate picture of the child's psychological strengths and limitations, as

well as considerable insight into environmental contingencies maintaining these behaviors (Logan, 2005). In addition to seeking information related to the referral problem, a number of environmental and functional domains should be reviewed. These areas include: home environment and family relationships; friendships and peer relationships; school and homework; activities and interests; and self awareness and feelings. While specific content covered in each area will depend upon the child's age and developmental level, each area may provide invaluable information (Monaco et al., 1997). Additionally, the order in which these areas are covered will be determined by who is in the room at different stages of the interview process, as well as by the interviewing format (unstructured, semi-structured, unstructured) chosen by the clinician.

The clinician should consider whether the referral has identified a broad problem behavior or functional difficulty (e.g., inattention, impulsivity, aggression, interpersonal difficulties) or a specific behavioral problem (e.g., not finishing assignments, pushing or hitting peers, yelling at parent/teacher). The clinician should seek to gain as much specificity about what behaviors are problematic and collect ratings of their intensity, frequency, and duration (McConaughy, 2000; O'Brien & Tabaczynski, 2007). Further, the therapist should seek to identify contextual influences that include the environmental antecedents to the occurrence of the behavior and the environmental contingencies (e.g., reinforcers, punishers) that follow performance of the behavior (McConaughy; O'Brien & Tabaczynski). The clinician should also ask the child to provide information about these contingencies, since the child is the greatest authority of what is salient in his or her environment. When interviewing adolescents, clinicians should be prepared to inquire about drug use and sexual activity. It is recommended that the clinician inquire about these activities in a straightforward manner while being mindful to address concerns of confidentiality (Monaco et al., 1997). Information provided by the child should be treated as any other source of data. That is, clinicians may become more confident in the accuracy of information when it is similar across informants (i.e., teacher report, parent report, behavioral observation) (Palmer et al., 2007).

Obtaining a clear understanding of the child's relationships with each family member of importance and the broad social climate in the home is vital yet often elusive. Family members may be hesitant to disclose information that they may perceive as presenting the family as conflictual or dysfunctional (Nock et al., 2007). Further, the family may have experienced divorce, remarriage, guardianship issues, and other changes that may influence the tone and accuracy of the information depending on the source. As such, it is vital that the clinician discusses with the child the features and perceived importance of each relationship (Monaco et al., 1997). Further, the clinician should be mindful that the importance of familial relationships often lessens in comparison to peer relationships as a child matures (Jayne et al., 2007; Monaco et al.). As previously described, clinicians must consider the family's culture when making judgments about familial relationships and dynamics. Many cultures place greater importance on honoring the family and working for the whole (sociocentric) in contrast to Western individualism (Johnson & Tucker, 2007).

Peer relationships can provide keen insight into discriminating problem behaviors and psychopathology (Jayne et al., 2007; Monaco et al., 1997). Children cultivate increasingly sophisticated interpersonal skills as they develop. As such, it is vital that the clinician have knowledge of interpersonal skill development in order to effectively examine and assess a child's social skills (Jayne et al.). Several areas to discuss with the child are his or her perceptions of friendships, and how he or she gets along with peers during school, specific

extracurricular activities, and in more casual settings (Monaco et al.). In particular, the clinician should assess whether the child experiences peer rejection, bullying, or social anxiety as these can limit the child's social development and persist over time. Further, behaviors such as aggression and social withdrawal or avoidance should be assessed as these behaviors also limit the child's ability to cultivate interpersonal skills (Jayne et al.).

School and related programs are a potent influence in any child's life and often the setting in which problematic behaviors occur. Classroom behavior, homework, interest in classes, extracurricular activities, and peer and teacher relationships are prominent factors in the child functioning effectively in the school environment (McConaughy, 2000; Monaco et al., 1997). It is important to directly assess each of these areas and inquire about changes across school years. Discussing activities and interests with the child may provide insight into his or her level of engagement in the environment. As previously described, discussion of interests is also an effective method for cultivating rapport (Monaco et al.; Powell & Lancaster, 2003).

Beyond learning how the child views his or her interactions with the world, clinicians should also discuss self-perceptions with the child (Logan, 2005; Palmer et al., 2007). Self-perceptions may include the child's sense of dependence, autonomy, and self-efficacy (Logan). As such, these perceptions influence the child's interactions with family, peers, school, and other aspects of the environment (Palmer et al.; Salmivalli & Isaacs, 2005). Negative self-perceptions have been found to be associated with depression, hopelessness, victimization, and negative attitudes toward peers (Salmivalli & Isaacs). An effective method for inquiring about these perceptions is to ask for the child's perspective on his or her life and the problems that brought him or her to the interview. By employing more pragmatic language with the child, the clinician can often obtain the needed information without using abstract concepts that many children may either not understand or be put off by.

Collectively, the described content areas represent the core domains that should be incorporated into each clinical interview. Additional areas of inquiry should be integrated based upon the presenting problems and referral needs. Similar to the semi-structured interview, the content should cover areas of functioning that are universally relevant to children, but be elaborated upon as each case demands.

8.3 Expert Competencies

The basic skills needed to be competent in the interviewing of a child or adolescent are extensive and lay the foundation for the clinician to effectively handle more difficult cases. Expert competencies are those additional skills required to effectively interview children when in crisis or danger, when they object to participating in the interview, or when the demands of diagnostic investigation extend beyond what is covered in the typical interview. The goals of accurate case conceptualization, diagnosis, and answering the referral do not change. Rather, the clinician must be prepared to adapt and meet the demands presented by more difficult cases. This section on expert competencies will describe how to handle children who are feeling suicidal or who are victims of physical and/or sexual abuse. This will be followed by a description of how to engage the difficult or oppositional child in the interview. Last, the "Expert Competencies" section will examine forensic interviewing and the unique challenges associated with obtaining accurate information.

8.3.1 Suicide Risk Assessment

Occasionally, clinicians must conduct risk assessments on children. Research indicates that the mean worldwide rate of suicide is approximately 4.5 per 100,000 children and adolescents between 10 and 19 years of age, with males having more than three times the risk of females (Centers for Disease Control and Prevention, 2005). Children also may engage in suicidal gestures or self-injurious behaviors. While these acts may not result in death, they are psychically harmful or threatening (Nock & Kessler, 2006). Asarnow et al. (2008) conceptualized suicide attempt risk along a continuum of increasing risk which ranges from suicidal ideation to one attempt and then up to multiple attempts. All clinicians must have a plan in place for dealing with children in crisis.

Children may be reticent to bring up this topic with clinicians; thus, it is important for clinicians to be aware of potential warning signs or risks. Researchers have identified depression, externalizing behavior problems, posttraumatic stress, substance abuse, environmental stress, and a history of suicide attempts or gestures as associated with increased risk (Asarnow et al., 2008; Nock & Kessler, 2006). Dervic, Brent, and Oquendo (2008) also cited family history of suicide, childhood affective disorders and externalizing disorders, and having a parent with a mood disorder or who displays impulsive aggression may make children more vulnerable for a suicide attempt.

When a client presents with suicidal ideation, clinicians must identify the severity of the threat and make the appropriate referrals. If the child endorses self-injurious behavior or suicidal ideation, the clinician should evaluate what is the intent of the behavior or threat, does the child have a plan, is the plan realistic, does the child have a history of prior attempts, and any additional information that allows the clinician to be confident that he or she can effectively address the threat that the child poses to himself or herself. The clinician should communicate this threat to the child's parents or caregiver, but this must be handled delicately so as to not destroy trust and rapport with the child. The clinician should have covered the bounds of confidentiality at the outset of the interview, so the child should not be surprised that his or her parents need to be notified. An excellent way to communicate this threat to the parents while preserving the therapeutic relationship is to allow the child to communicate the threat or plan to his or her parents. The clinician, however, should not assume that the child will do this at home and this notification should occur within the context of the interview visit. Alternatively, the clinician must communicate this risk, even if the child objects. If the threat is judged to be legitimate and imminent, then the clinician should most often refer the child for inpatient treatment. While the most restrictive environment, inpatient treatment is often best able to manage opportunities for self-injurious behavior.

8.3.2 Difficult Children in the Interview

The clinician should be prepared that often the child will be unwilling to actively participate in the interview for an array of reasons. Reasons may include reticence to discuss their problems or their families, cognitive and emotional limitations in development, and outright opposition to being in the interview (House, 2002; Villa & Reitman, 2007). While each child presents a unique constellation of behaviors, the clinicians should have a number of strategies that can be used in an attempt to put the child at ease, foster trust in the interviewer, and engage the child

in the interviewing process. As with other aspects of the interview, age and maturity will substantially influence the type of opposition and unwillingness to participate in the interview.

The clinician can often anticipate when an interview will be particularly difficult by asking a few questions when the referral is made. Questions may include: "Does the child know that he or she is coming for an interview? Does the child know why the interview is being conducted? and How does the child behave when he or she meets someone new?" The clinician should also consider the context for why the interview is being conducted and who is the referral source. Children being referred for mental health services by their parents may present very differently than children referred by the schools or the courts. It would be quite rare that a child would seek out services on his or her own.

The clinician will often talk with the parents and the child together. The clinician should be attentive to how the parents discuss the problem with the child present. This can provide the clinician great insight into how the problem is perceived and discussed within the family. The clinician should also consider that parents and referral sources often view the problem behavior with greater concern than the child (Handwerk, 2007). This discrepancy may influence the child's reservation to talk openly with the clinician since they may not view that there is a problem, or that by discussing it they are legitimizing their parents' concerns.

When children are resistant to the interview or do not perceive their behaviors as a problem, they are often terse in there responses (e.g., "fine," "good," "ok," etc.). The clinician can best challenge this by citing specific events that the parents or referral sources have reported, but the clinician must be wary that this could polarize the child's perception that the clinician is aligned with the parents. To address this, the clinician will benefit from telling the youth that his or her parents report this as a concern, but the clinician wants to hear the point of view from the child also. The clinician may elaborate that he or she does not uniformly assume that parent or school reports are accurate, and it is important that the child present his or her knowledge and impressions of events and questions being asked in the interview. This open acknowledgment of the importance of the youth's perspective is often very useful in the cultivation of rapport and trust (Handwerk, 2007).

8.3.3 Maltreatment and Abuse

Physical abuse, sexual abuse, and other forms of child maltreatment are unfortunate but important environmental influences of which the clinician must be aware. Due to the sensitivity of discussing abuse, the possibility that the perpetrator of abuse is a parent or a caregiver who has transported the child to the interview, and the susceptibility of children to suggestion, the clinician must be very mindful of the format and phrasing of questions when probing for abuse or details related to abuse. Substantial amounts of research have been conducted in the field of forensic psychology indicating that open-ended, free-recall, and cued-recall questions are more accurate and offer less suggestibility than questions presented in a forced choice format (e.g., yes–no), option format, and suggestive questions (Perona, Bottoms, & Sorenson, 2006; Thoreson, Lønnum, Melinder, Stridbeck, & Magnussen, 2006). The suggestiveness of all questions should be conceptualized as a lying on a continuum. In the context of probing for abuse or maltreatment, the clinician should err on using less suggestive and open-ended questions, but this form of questioning may leave out necessary details. As such, more specific questions may be appropriate later in the interview as a picture of events is developed (Perona et al., 2006;

Thoreson et al., 2006). The clinician must also consider the situational context as it may drastically influence the child's recall and willingness to disclose. This may include being brought to the interview by the perpetrator of the abuse (i.e., parent), or being told misinformation by a family member in an effort to confuse the child or alter the child's recall of events (Palmer et al., 2007; Perona et al.).

Allegations of abuse should be reported to the appropriate agency within each state. This reporting is both required by law and the APA ethics code (Palmer et al., 2007). Clinicians should accurately and specifically document all allegations of abuse in written records as well as videotapes or audiotapes when available. Parents and children should be informed of the bounds of confidentiality and documentation practices at the outset of the interview when conducting informed consent (Wise et al., 2007). It is also suggested that the clinician should inform the child and the parents when an allegation has been made that warrants reporting. While disclosures of abuse and related reporting are oftentimes upsetting and volatile situations, the clinician may preserve or strengthen the therapeutic relationship by using direct and open communication.

8.3.4   Forensic Interviewing

The forensic interview differs from the typical clinical interview since it is conducted for the purpose of legal proceedings. As a result, the clinician should approach the interview with the knowledge that the client's (i.e., child) participation is not voluntary (Meloy, 1989). Forensic interviews are most often requested to make decisions regarding child custody and protection, and to determine competency and appropriate charges for criminals, as well as appropriate clinical interventions. As such, the primary goal of the forensic interview is the same as the traditional clinical interview: answer the referral request. However, the clinician must be vigilant to obtain the information necessary to avoid false allegations and identify abuse in children (Perona et al., 2006; Peterson & Biggs, 1997). It is also possible that a clinician could be requested to conduct a forensic interview with an adolescent who is the accused. For the purpose of the current discussion, this chapter will focus on conducting a forensic interview with a child as the victim.

The clinician must consider a number of factors prior to beginning the clinical interview. First, the clinician should consider the developmental level of the child. Using an open-ended format with younger children may be inadequate for obtaining information with the neces-sary depth and breadth (Perona et al., 2006; Peterson & Biggs, 1997). Conversely, the clinician should be mindful that older children and adolescents are much more cognizant of social consequences that may occur as a result of disclosure. The clinician must also be mindful of the previously examined cultural considerations (Perona et al.). Last, the clinician must also consider that the child may have been deliberately told false or suggestive information prior to the interview. Many accusations are later recanted in the context of the forensic interview. The clinician must not automatically assume that the recant is false, but the clinician should also consider that the child has been pressured either directly by an individual or by the social costs and stigmatization associated with being a victim of a crime such as physical or sexual abuse (Perona et al.).

When conducting the interview, research indicates that information provided by the child is most effectively obtained by utilizing open-ended questions that allow greater latitude of responses. Clinicians should also be mindful to present questions in a manner that limits the clinicians influence on what information is chosen to be reported (Perona et al., 2006).

An example is "Tell me about why you have been asked to talk with me." The clinician will undoubtedly need to use more specific or concise questions at times, but every effort should be made to allow the child to provide an unguided description of events. In particular, the clinician should be wary of employing yes–no questions, using language that the child does not understand, incorporating information into the question that the child has not reported in the context of the interview, asking the same question repeatedly, and inquiring about tangential details rather than core elements of the alleged event (Perona et al.; Peterson & Biggs, 1997). The use of aids (e.g., dolls, drawing) in the context of the forensic interview must be approached with caution. It is suggested that these only be employed after initial details have been provided, that the clinician has the child provide a concurrent verbal description of events, and that the clinician is careful not to present these items as a play activity that may involve imaginative play. Last, the clinician should not make inferences regarding the occurrence of an event based upon observed play or drawing content (Perona et al.).

The general format of the forensic interview does not dramatically differ from that used in the typical clinical interview, but there is evidence that choosing a validated structured interview may obtain more accurate information and minimize the risk of suggestion from the interviewer. Just as each clinical interview conducted for the purpose of diagnosis may be unique to the presenting problems and symptomology, each forensic interview is unique to the alleged crime and population (Perona et al., 2006). While many clinicians may not have interest in forensic interviewing, many clinicians will encounter allegations of abuse, neglect, and other crimes involving their clients. As such, it is essential that clinicians be aware and mindful of forensic interviewing strategies in order to obtain the most accurate information and best serve the client's needs.

8.3.4.1 Trajectory for Obtaining Competency

The importance and utility of the clinical interview is undeniable and reflected in its use by nearly every type of mental health practitioner and its broad application across a myriad of symptom presentations and referral reasons. Competent administration of the clinical interview is an essential skill that is often inadequately cultivated in training programs (Turner et al., 2003). Every practitioner should obtain the core training requirements for competent interviewing, but additional training needs may be necessary depending on the specific interview being utilized, the types of children being interviewed, and the referral questions to be answered. As such, competent interviewing is a two-stage process composed of didactic and applied training experiences. These training experiences do not have to occur in a linear order but may occur concurrently.

Didactic training should include an extensive knowledge of the developmental process, cultural variability, psychopathology, and diagnostic criteria (Sommers-Flanagan & Sommers-Flanagan, 2002; Turner et al., 2003; Villa & Reitman, 2007). While most of this knowledge should be available through graduate-level coursework, the practitioner has the responsibility to supplement areas of need with additional readings and training opportunities. Clinicians should cultivate a strong knowledge of the developmental process. This knowledge should include awareness of developmental milestones, gender differences, and developmental disorders. As such, the clinician should be able to discriminate normal from abnormal developmental trajectories (Villa & Reitman). The clinician must also seek training experiences in culturally sensitive practice as defined by the APA (2003). While extensive knowledge of each culture potentially encountered is not possible, the clinician should be knowledgeable in the cultural limitations of the DSM-IV-TR and structured interviews, as well as communication barriers

(e.g., language, stylistic). Most training programs have coursework available in multicultural psychology; however, practitioners may also consult the DSM-IV-TR (APA, 2000) and the APA's *Guidelines on Multicultural Education, Training, Research, Practice, and Organizational Change for Psychologists* (2003) for additional direction.

Since symptom presentation of psychopathology often differs between children and adults, clinicians who interview children should be aware of these differences and be able to differentiate disorders (Jayne et al., 2007; Villa & Reitman, 2007). In conjunction with this training, clinicians should be familiar with both DSM-IV-TR (APA, 2000) and ICD-10 (World Health Organization, 1993) criteria. Though psychology more often utilizes the DSM-IV-TR criteria, familiarity with ICD-10 disorders and criteria can increase the effectiveness of communication with the medical field, which rely more heavily on the ICD-10. As previously mentioned, much of this core knowledge will be obtained during graduate training; however, clinicians should keep abreast of new research, new and updated interview formats, and future revisions of diagnostic criteria through continuing education (CE) courses and relevant articles found in peer-reviewed journals. Collective integration of these didactic training experiences should provide the clinician the base knowledge necessary to effectively understand symptom presentation and provide discriminating diagnoses.

In addition to didactic training, the clinician should seek diverse and extensive applied training experiences. These may be obtained through in-house and external practica during predoctoral training at one's university, internship, postdoctoral fellowship, and beyond. These applied experiences should include both extensive observation and conducting interviews under the supervision of a more experienced clinician. First, the clinician should be exposed to conducting interviews in a variety of settings (Sommers-Flanagan & Sommers-Flanagan, 2002). In the case of interviewing children, the clinician should seek opportunities to observe and conduct interviews in schools, hospitals, treatment centers, and private practice settings. The clinician should also seek to be exposed to both directive and nondirective interviewing styles. In practice, the clinician will have to utilize both styles depending on the child's attitude toward the interview and their ability and willingness to offer information. The clinician should also seek opportunities to observe and conduct interviews under the supervision of an experienced interviewer. Supervision allows the clinician to receive feedback regarding cultivation of the therapeutic relationship, effective communication with the client, and implementation of the interview. The clinician should also seek opportunities to visit schools and day cares in order to cultivate a model of how normal functioning children behave and interact. These observations serve as a powerful supplement to readings on the developmental process. Finally, additional training is often required for clinicians choosing to use specific structured or semi-structured interviews. These additional training demands vary considerably, but are essential for competent administration of selected measures.

8.4   Summary

The clinical interview is an essential skill for every clinician, whether practicing in an acute care hospital setting, school, or private practice. As such, it is the duty of clinicians to be well prepared to negotiate the distinct challenges encountered in each case for effective practice of the clinical interview. The purpose of this chapter was to detail the skills and competencies necessary in interviewing children and adolescents. Basic competencies specified that the clinician should possess an extensive knowledge of child development, diagnosis, and multicultural psychology. Variability in developmental trajectories and cultural influences makes it clear that clinicians

cannot assume a one-size-fits-all interviewing format. Rather, each case presents an array of factors that necessitate the clinician to balance the uniqueness of each case and the appropriate interviewing style to answer the referral question or accurately differentiate symptoms and diagnoses. Clinicians must also be prepared to effectively and appropriately utilize other sources (e.g., parents, school) in the interviewing process. While the level of outside involvement in the interview may be prominently guided by the age or developmental level of the child, it is undeniable that parents, teachers, and others serve as essential contributors of information regardless of the child's age.

Basic competencies also examined the process of selecting the most effective interview format (i.e., structured, semi-structured, unstructured) to capture necessary and relevant information. While an unstructured format may have merit in select situations, there is substantial evidence that structured and semi-structured interviewing are generally most appropriate and effective in obtaining the necessary information. Related to interview structure, question format represent another potent influence on the accuracy and quality of information provided. Last, the "Basic Competencies" section described effective administration of the core components of the interview (i.e., rapport building, confidentiality, and content).

Expert competencies are those that allow the clinician to effectively address more complex clinical cases. Difficult interviews may occur due to the child's behavior, the nature of the interview content, or some combination of these and other factors. Effectively addressing these factors in the context of the interview and obtaining an accurate appraisal of potential personal and external threats is a vital responsibility of the clinician. As such, the clinician must also be adept in their interactions with outside institutions. In some cases, this may be in the context of the forensic interview. More likely, the clinician will be presented with the need to interact with schools, police, hospitals, and state agencies. Regardless of the scenario, the clinician must be prepared to effectively meet the needs of the client.

Finally, a trajectory for obtaining the requisite interviewing competencies was described. Clinicians cannot assume that competent interviewing can be conducted by merely looking over the structured interview in advance or asking questions specific to the referral reason. Clinicians must seek both didactic and applied training experiences in order to cultivate the requisite skills. While these training demands may appear overly demanding, these experiences will enable the clinician to more accurately diagnose and effectively answer the referral.

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9 Cognitive Assessment with Adults

Gerald Goldstein

Abstract: This chapter reviews competencies involved in performing cognitive assessments of adults, making a distinction between cognitive assessment and clinical neuropsychological assessment, each of which require different doctoral level education, different areas of expertise, and different professional practicum training. Cognitive assessment plays its traditional role in clinical psychology maintaining the organizational structure, scientific and professional status, and clinical services that have existed in the past. The APA can now accredit educational programs in clinical neuropsychology at the predoctoral or postdoctoral level, and there are numerous neuropsychology journals and several societies. Clinically, many healthcare facilities now have designated clinical neuropsychologists on their staffs. This chapter reviews the basic competencies required for both cognitive and neuropsychological assessment of adults, including considerations of training models, accreditation at varying levels of expertise, and substantive clinical competencies.

9.1   Overview

In keeping with what has clearly become the pattern of contemporary clinical practice, this chapter will make a distinction, within the field of adult assessment of cognitive function, between cognitive assessment and clinical neuropsychological assessment. While both forms of assessment are involved with the evaluation of cognitive abilities and both represent, in part, what was once a single competency area, they are currently quite different from each other and require different doctoral-level education, different areas of expertise, and different professional practicum training. The distinction between the two areas has been established in numerous ways. Organizationally, the American Psychological Association (APA) now has a Division of Clinical Neuropsychology (40) and has designated clinical neuropsychology as a specialty area. That means that the APA can accredit educational programs in clinical neuropsychology at the predoctoral or postdoctoral level. Scientifically and professionally, there are numerous neuropsychology journals, such as *The Journal of Clinical and Experimental Neuropsychology*, and several neuropsychology societies, such as the National Academy of Neuropsychology. Clinically, many health-care facilities now have designated clinical neuropsychologists on their staffs. Cognitive assessment maintains its traditional role in clinical psychology maintaining the organizational structure, scientific and professional status, and clinical services that have existed in the past. The process involved here may be characterized as one of branching out of clinical neuropsychology as an independent discipline.

9.1.1   Cognitive Assessment

Cognitive assessment is typically associated with evaluation of intelligence, aptitude, academic achievement, and specific cognitive skills such as memory, language and related communicative abilities, and perceptual and motor skills. These aspects of behavior are generally evaluated with published tests, and there is a large number of intelligence, aptitude, psychoeducational, and specialized cognitive tests available to the professional public. Members of professions other than psychology are often qualified to use these tests, mainly teachers, vocational counselors, and individuals involved in selection, notably for student admission to educational programs and military service. While a psychologist is generally involved in the construction and choice of tests to be used in particular applications, the tests themselves may be administered and scored by others, and decisions based upon the tests need not be made by psychologists. Thus, a school psychologist may choose some particular academic aptitude or achievement test, but after that selection is made the implementation of the assessment may be conducted by teachers or managers. It is desirable for the individual choosing the tests and providing oversight to the program in which they are used to be a qualified school, educational, industrial, counseling, or clinical psychologist. Test publishers typically do not sell tests to individuals without credentials in these or related areas, and maintain established qualification procedures.

Clinical psychologists share with educational psychologists the application of these tests to evaluate aptitude and achievement, most notably when these areas become problematic. There is a widely accepted manual for test construction standards that combines psychological and educational tests (AERA, APA, & NCME, 1999). Thus, psychologists may use cognitive tests to aid in diagnosing mental retardation, learning disability, or conditions that frequently impact on learning, notably attention-deficit hyperactivity disorder (ADHD). While this activity mainly involves children, recent literature has strongly documented the presence of persisting learning disability and ADHD in adults (Katz, Goldstein, & Beers, 2001), and cognitive tests are now commonly used in the assessment of these disorders in college, vocational, and clinical settings. Thus, it is not uncommon for a client of a counseling service who is experiencing vocational difficulties to receive intelligence and psychoeducational tests.

Within the specialty of clinical psychology, cognitive assessment is used for a number of purposes related to health-care considerations, mainly involving application of cognitive testing to psychiatric patients. In this case, tests are most typically used as a component of the evaluation of psychopathology, most often as part of a battery given with other kinds of tests. Cognitive tests, in these cases, might be given in association with personality tests, structured psychiatric interviews, projective techniques, and related methods of evaluating mental disorders. An extensive literature has emerged over many years on the use of cognitive tests for individuals with schizophrenia, mood disorders, anxiety disorders, alcoholism and other substance use disorders, and dementia of various types. Intelligence tests continue to be used in their traditional role of diagnosing mental retardation.

An important point to emphasize is that cognitive tests are used for evaluation of normal and abnormal phenomena. In many countries, all children are given intelligence tests beginning in early life which may be repeated, usually in connection with vocational assessment or determining eligibility for military service. There are mandated "IQ" requirements for certain jobs, and cognitive function may be a selection factor for acceptance or appointments of

various types. That being the case, cognitive assessment cannot really be construed as strictly a "clinical" activity, and is clearly not a competency area involving only clinical psychology or some other clinical specialty within psychology, such as geropsychology. Cognitive testing may be performed by teachers, employers, agencies that select people for employment such as the Department of Defense or the Office of Personnel Management and other decision-making entities concerned with classification or selection. However, there is a general acceptance of the view that one should not permit individuals without required competencies to perform such activities as giving an individual intelligence test to a patient or client and describing that person as "mentally retarded" or should unqualified individuals use psycho-educational tests to classify a person as "learning disabled." That is, using cognitive tests in clinical decision-making without possessing the necessary competencies should be viewed as unethical.

Several approaches have been developed to help assure that cognitive assessments are conducted only by appropriately competent individuals. One group of policies has to do with the tests themselves. As indicated, some cognitive tests may also be described as educational tests, although the ambiguous term "psychoeducational" is sometimes used, possibly creating complications. It would appear that teachers with appropriate education and experience should be able to administer, score, and interpret educational tests. One could imagine that tests of other abilities, for example motor dexterity, could be used by a potential employer to determine whether a prospective employee has a sufficient skill level to perform the work required, even though there are designated psychological tests of motor dexterity.

Making this distinction is linked in the case of publishers of psychological tests to restriction policies regarding the sale of the tests. It is not uncommon for publishers to require customers to register, providing their qualifications. In some cases, a license to practice psychology is required. Sometimes tests are graded such that tests may only be sold to qualified psychologists while others are made more generally available. Some test publishers have rated tests at varying qualification levels. In one system, individuals with training in measurement or guidance can purchase some tests; individuals with a Bachelor's degree can purchase some additional tests and other tests may be bought only by individuals with a Master's or doctoral degree. Some tests are only available to individuals with a doctoral degree, and in most cases, a license. For example, a survey of interests can be purchased by someone with a Bachelor's degree while a license is required to purchase an extensive test of personality and psychopathology. Within the area of cognitive assessment, tests of educational achievement, such as reading comprehension tests, are generally available to individuals with Bachelor's degrees, while purchase of comprehensive intelligence tests requires a doctoral degree and/or license. This kind of decision-making is admittedly controversial and there have been disputes regarding which specialties should be permitted to purchase particular tests. It is therefore probably a good idea to establish an adjudication body that can resolve matters of this type. The licensing laws themselves and the APA's code of ethics also provide some safeguards. Considerations of going beyond the scope of practice or the loss of license may be relevant. For example, if a license is lost by an individual in practice because of failure to meet continuing education requirements, such an individual is by definition not competent to perform psychological assessments of patients.

The actual competencies needed to perform cognitive assessments vary with the considerations offered above. In order to do the most basic evaluations, it is desirable to have some training at least at the undergraduate level in tests and measurements. Courses in introductory

psychology and psychometrics or psychological testing are necessary, and additional courses making up a psychology major such as abnormal or educational psychology would be helpful. Such training would allow the individual to purchase lower-qualification-level tests, and provide the information needed to administer and score tests of that type. These individuals should be able to administer tests using manual instructions, do the quantitative scoring, and understand the meaning of the scores: for example, know the distinctions among a raw, standard, and percentile score. Individuals with a Master's degree in clinical or educational psychology should have the qualifications needed to administer, score, and interpret most cognitive tests including the individual, comprehensive intelligence tests such as the Wechsler scales or the Stanford–Binet. As part of their education, they typically take appropriate course work and have practicum experience with numerous cognitive and psychoeducational tests. Many of these individuals are employed as school psychologists and perform these assessment services in their schools.

It is now common practice to have technicians administer and score tests, particularly in programs in which mainly the same tests are given to all clients. Use of technicians by psychologists is allowable in most states, with a small number of exceptions. There are established competency standards for technicians involving education and training. Typically, a technician should have a Bachelor's degree with a psychology major. Upon employment, the technician should undergo a period of instruction involving general procedures for test administration and the specifics of the tests used. There should be monitoring of testing and often an informal examination is given in which testing is observed by the psychologist's supervisor who then provides a critique and makes an evaluation of the ability to work with clients independently. Depending upon the tests used, it is sometimes important to establish reliability of scoring through comparing the scores made by the trainee to those of an established expert. Technicians do not have clinical responsibility and anything they write must be countersigned by the supervising psychologist.

Cognitive assessment conducted by doctoral-level clinical psychologists is probably most often done in clinical settings as part of the evaluations of psychopathology. Typically, the cognitive tests are administered along with a battery including personality tests and diagnostic interviews. In contemporary practice, only individuals with licenses and doctoral degrees have these procedures within their scopes of practice. Such individuals have the qualifications to administer and score tests with sometimes complex procedures, and provide diagnostic evaluations concerning such matters as cognitive profiles and interactions between cognitive function and psychopathology. Sometimes the interpretations made are based in some theoretical framework such as psychoanalytic theory, and cognitive tests are integrated with personality tests and interviews to form inferences about personality dynamics, thinking disorders, or symptomatic anxiety or mood states. Interpretation at this level requires training in the theory upon which these inferences are based and development of the skill to blend together information coming from various test material. Within a psychoanalytic framework, some time ago David Rapaport viewed the Wechsler intelligence scales as a measure of ego functions that could provide important information about adaptive and defense mechanisms. For example, in a discussion of diagnosis of neurosis he said: "In this range, indications of extreme anxiety or utter inability to express anxiety – seen either on the Rorschach Test or the Bellevue [Wechsler] Scale, or in the clash of their indications – are usually accurate in pointing to the presence of a maladjustment justifiably labeled neurotic" (1946, p. 463). Here a clinical diagnosis is inferred from an intelligence test independently or in combination with another test. In current practice, clinical psychologists continue to use test batteries including cognitive tests to make inferences about personality characteristics, psychopathology, disordered thinking, and emotional state, such as anxiety level.

In summary, cognitive assessment is used in a variety of applications with the differing applications requiring different competencies. The tests themselves range from uncomplicated procedures that can sometimes be self-administered or given with simple instructions and objectively, quantitatively scored to highly complex instruments that present challenges that require particular expertise to administer properly and score. Some tests only allow for direct, usually quantitative interpretation, while others provide for very elaborate interpretation that can generally only be provided by appropriately trained psychologists. The applications themselves include the traditional ones of identifying mental retardation and educational difficulties, selection and classification in educational, military, and vocational settings, and their use, generally in full batteries, for clinical evaluations of personality and psychopathology. Efforts have been made by test publishers, licensing Boards, and professional societies to regulate application of tests, such that it is conducted in an ethical manner by individuals with appropriate competencies.

9.1.2 Origins of Clinical Neuropsychological Assessment

Establishment of clinical neuropsychology as an independent scientific and clinical discipline has significantly changed the practice of cognitive testing by psychologists. Previously cognitive testing for clinical purposes was conducted by clinical or educational psychologists, who receive as part of their education instruction in the use of intelligence tests, educational tests and various other cognitive tests of specific functions such as memory, language, or perceptual–motor coordination. In the case of intelligence testing, introduction of the Wechsler scales permitted the assessment of intelligence in adults with procedures that were initially meant for children, such as the Stanford–Binet scales. As part of their general practices many clinical psychologists were asked to assess not only patients with the traditional psychiatric disorders, but also patients with physical disorders that produced cognitive impairment as a result of damage to the brain, such as traumatic brain injury or stroke. Elderly patients, who were suspected of having a dementing disorder such as Alzheimer's disease, were also commonly referred. As this pattern of referral emerged, a great deal of research concerning the use of these tests in the assessment of brain-damaged patients appeared. This research was incorporated into clinical psychology training programs, and it became established that clinical psychologists should have a competency in the assessment of brain-damaged patients. Typically, these assessments were conducted using the tests that the clinician used in general practice. They commonly included the Rorschach Test, the Minnesota Multiphasic Personality Inventory (MMPI), the Wechsler Scales, Human Figure Drawings, and a clinical interview. Correspondingly, the prevailing research literature involved studies that used such procedures as the Wechsler scales or the Rorschach Test in assessment of brain damage.

In another area of health-care practice, other clinicians, mainly physician neurologists, were assessing brain-damaged patients for cognitive dysfunction, but with substantially different strategies and instruments. The history and clinical neurological examination were their major instruments, and they were largely concerned with cognitive abilities that could provide evidence of localized brain damage. Thus, often in association with speech-language pathologists, they had a great interest in aphasia which is generally associated with damage resulting from stroke involving particular areas in the left (dominant) hemisphere of the brain. Some physicians, now known as behavioral neurologists, have particular expertise in cognitive disorders that could be associated with specific brain regions. These clinicians had the expertise

needed to examine for aphasia and also for disturbances of perception and skilled movement. Such disturbances, known as agnosias and apraxias, are organized into numerous clinical syndromes and often have well-defined brain pathways. These behavioral neurologists, sometimes characterized as "diagram makers," identified a large number of these syndromes incorporating the behavioral pattern and the brain correlates. For example, there is a syndrome called "alexia without agraphia" in which the patient has lost the ability to read but can write, as demonstrated by the failure to read what the patient has just written.

A group of psychologists developed an interest in these kinds of patients and, generally in collaboration with neurologists, began to study them. This practice represented a departure from the traditional association between clinical psychology and psychiatry, and promoted an alliance with neurology and neurosurgery. Thus, psychologists began to work in neurology and neurosurgery wards in hospitals and collaborated with neurologists and neurosurgeons in research and clinical practice. Because of the nature of their work, these psychologists needed to develop expertise in neuroscience, clinical neurology, and the behavioral neurology of various disorders. Some of them developed particular expertise in particular disorders such as stroke, multiple sclerosis, brain tumors, dementing disorders of the elderly, etc. These individuals did not actually become neurologists but learned much of the knowledge base needed to work clinically or do research with neurological patients. As this process took place, the need became apparent for new testing procedures because the assessment issues associated with these patients were apparently radically different from those that existed for psychiatric patients. The traditional clinical psychological tests might identify depression in a patient who had a stroke, but they could not characterize the behavioral consequences of the stroke itself.

This new application of psychology resulted in the development of what we now call neuropsychological tests. Perhaps the best definition of a neuropsychological test was made anecdotally by Ralph Reitan, who said that it is a test that is sensitive to the condition of the brain. These tests were derived from four major sources; existing cognitive tests of various abilities such as the Wechsler Memory Scale, tests originally in use in research but not extensively in clinical practice such as the Continuous Performance Test, modifications of the behavioral neurological examination introducing standard administrative and quantitative scoring systems, and tests developed initially for use in clinical neuropsychological testing such as the California Verbal Learning Test. Some of these tests were organized into batteries, and we now have a number of standardized neuropsychological test batteries. Others are the same as those regularly used by clinical psychologists, such as the Wechsler intelligence scales, but it has been suggested that when these tests are used as part of a neuropsychological assessment in the context of other tests they are used for different purposes. It was said some years ago by the neuropsychologist John McFie: "It is perhaps a matter of luck that many of the Wechsler subtests are neurologically relevant" (1975, p. 14). In Reitan's terminology that remark could be translated into saying that some of these tests have been shown in appropriate research with brain-damaged patients to be sensitive to the condition of the brain.

When a referral is made for neuropsychological testing, the concern is for documenting and characterizing known or suspected brain dysfunction. The neuropsychologist, aside from describing the patient's cognitive abilities, is expected to make inferences about the relation between the test results and their correlates in brain function. Typically, the questions asked involve presence or absence of brain injury or disease, location, and extent of the brain lesion if present, associations between the test performance and the nature and site of the brain lesion, and predicted course and outcome. These assessments are generally viewed as part of the full

evaluation which might involve a physical examination, taking of a history, and use of various laboratory and neuroimaging procedures. Ideally, the neuropsychologist, neurologist, and psychiatrist should share a common language and body of knowledge in the interests of communication and integrating all of the assessment data obtained.

Cognitive assessment by psychologists has changed in recent years one reason being the emergence of clinical neuropsychology as a specialty requiring a separate set of skills and competencies from what is required for clinical psychology in general. We, therefore, proposed a distinction in the discussion of competencies between cognitive and neuropsychological assessment. The main difference appears to be the emergence of clinical neuropsychology where there is a major concern with the relationship between behavior and associated brain function. It is based on an extensive scientific literature concerning human brain function and to some extent the animal literature as well. However, in order to be competent in any form of psychological assessment the practitioner needs to have a core of knowledge and expertise. The major category of this background is psychometrics. All psychologists who give tests should have a background in test construction, concepts of validity and reliability, standardization and use of norms, associated statistical procedures such as factor analysis, and the importance of standard administration and scoring. Furthermore, clinical psychologists should not be totally ignorant of brain dysfunction, and should be capable of identifying possible neurological disorders during their assessment. Correspondingly, neuropsychologists should not be insensitive to the influence of factors such as depression, anxiety, and malingering on cognitive test performance. There are therefore basic competencies that all psychologists doing assessment work should have as well as specialized knowledge and skills.

9.2   Basic Competencies of the Clinician

As indicated, there are areas of overlap and divergence between competency in cognitive assessment and clinical neuropsychology. However, there is a common core that applies to both groups. One important component is a background in psychological testing, with particular emphasis on the assessment of cognitive function. Development of basic competencies in cognitive assessment may begin at the undergraduate level in courses in psychological testing. A course of this type is generally considered to be important for students with psychology majors. Psychological testing courses generally cover its history, content areas, matters related to test construction, standardization, and psychometrics involving concepts of validity and reliability, and the statistical methods used to establish them. Content areas typically covered include intelligence, aptitude, interest, academic achievement, and personality. If some basic knowledge of statistics is assumed, such as familiarity with correlation and t-tests, more advanced methods may be covered such as factor analysis and scaling methods. There is generally a consideration of theoretical material particularly with regard to the varying theories of intelligence. Whether intelligence is a general ability (g) or a number of special separate abilities remains an important theoretical issue, as does the factor structure of intelligence. Whether accomplished at the graduate level or later on, knowledge of test construction and its scientific basis are perhaps the most important basic competencies psychologists should have to do clinical work with tests.

Competencies at the Master's degree level typically concern actual administration, scoring, and basic interpretation of tests. The psychologist working professionally with a Master's

degree, such as many school psychologists, is expected to be able to competently administer, score, and interpret cognitive tests. During their education, they are generally required to gain substantial supervised practicum experience. In some states, individuals with Master's degrees may be eligible for licensure, although that practice is diminishing. In clinical settings, individuals with Master's degrees and technicians are supervised by licensed psychologists but can still administer and score cognitive tests. The matter of interpretation is more equivocal, but in any event, written reports are typically countersigned by licensed psychologists.

Training in cognitive assessment at the doctoral level varies with the background of the student and the philosophy of the program. Some students already have Master's degrees when they enter their doctoral program and may already be familiar with intelligence and psychoeducational tests. Some students may want to go on to be clinical neuropsychologists and require in some ways substantially different training from those who want to be general clinical psychologists. Different programs have varying views of the importance of assessment with tests in clinical practice, and so formal cognitive testing may not be highly emphasized. There may be some degree of subtle interplay between the controversies that surround intelligence testing in both the public and professional sectors, and that may influence what one learns in graduate school.

In at least the more traditional doctoral programs in clinical psychology, students are expected to achieve a number of specific goals regarding cognitive assessment as follows: (1) They must become capable of administering, scoring, and interpreting individual intelligence tests. The current version of the Wechsler intelligence scales (now the WAIS-IV) (Wechsler, 2008) is the most commonly used instrument, and it is probably fair to require that the student know the WAIS even when there is a preference for other tests, such as the Binet Scales. Basic concepts such as the deviation IQ, the meaning of intertest scatter, the rationale for distinguishing between verbal and performance IQ, the factor structure of subtests and factor analysis-based indices, and sociodemographic adjustment of scores are perhaps the major areas about which students should learn. Development of test norms accounting for relationships between age and education and test performance should be understood. (2) Depending upon the setting in which they work, they should be familiar with some psychoeducational tests. Because of the large variety of such tests, it is not possible to specify which ones, but there should be some capability of assessing reading, writing, mathematics, and more general attentional abilities. Working with adults in nonacademic settings, it is probably most useful to be familiar with a psychoeducational battery that has been well standardized for adults. The Wide Range Achievement Test is probably the most commonly used one (Jastak & Wilkinson, 1984). More specialized tests may be used with adults when there is a current academic or neuropsychological issue. (3) Whether the training program is oriented toward the Boulder "Scientist-Practitioner" or Vail "Practitioner-Scholar" model, some amount of science and research training is maintained, although it may vary in extent from program to program. However, if results of cognitive tests are to be interpreted at a professional level, the psychologist would appear to need some background in cognition. Courses and readings in cognitive psychology are a crucial part of the curriculum, giving the practicing psychologist some basic knowledge of attention, memory, executive abilities, language, and spatial ability domains of cognition. For those seeking a career working with seriously mentally ill individuals, such as patients with schizophrenia, it is also important to have some background in the form of abnormal thinking found among such patients. Basically, a clinical psychologist using cognitive tests should be

able to make some statements about the individual's information processing, and identify areas of intactness and abnormality. In people without mental illness, it is generally possible to identify areas of strength and weakness that may be academically or vocationally relevant, while in seriously mentally ill patients it is usually important to characterize the nature of the thinking disorder.

(4) In addition to intelligence and psychoeducational tests, there should be some knowledge of tests of more specific cognitive abilities. Psychologists in practice commonly use such instruments as continuous performance tests for assessment of attention, tests of memory, notably the Wechsler Memory Scale, and tests of perceptual–motor coordination, such as the Bender–Gestalt Test. There should also be familiarity with ways of assessing functioning with procedures other than formal cognitive tests. A good example is the "Thought Disorder Index," obtained from the Rorschach Test which is a procedure for identifying schizophrenic-type thinking disturbance from interpretation of ink blot patterns (Hunt, Holzman, & Davis, 1983). In general, competence should be developed in the detection of abnormal thinking in conversation and other behavior aside from formal tests. (5) The clinician should be aware of the ecological validity of the tests used. This information is typically derived from comparisons between test scores and functional assessments of everyday living. Commonly asked questions involve the extent to which cognitive tests are predictive of academic or vocational outcomes. In the case of seriously ill psychiatric patients, intelligence tests may be predictive, perhaps to varying extents, of rehabilitation outcome particularly with regard to adjustment to community living.

These basic competencies should be present regardless of whether the psychologist is a clinical psychologist or a clinical neuropsychologist. Basic knowledge of test development, psychometrics, the psychology of cognition, theories of intelligence and related cognitive functions, the psychopathology of cognition, and knowledge of the predictive validity of tests used would appear to form a basic core of competencies for all psychologists doing cognitive assessment work. Differences in competency requirements depend upon specialty differences, most clearly defined in the differences between clinical psychologists and clinical neuropsychologists. However, there are several subspecialties within clinical psychology. Psychologists who work mainly with elderly individuals have to deal with several cognitive assessment issues. There is first of all the nature of the testing materials themselves. Elderly individuals often have visual and hearing difficulties, and may have experienced some deterioration of motor function. Therefore, if the available tests pose problems for elderly individuals with regard to perceiving or manipulating the materials, modifications may be needed to obtain a valid assessment of cognition. Larger letters for reading tasks may be needed, sound level may have to be amplified, or test materials should produce reduced requirements for fine motor manipulation. Similar matters arise in the case of physically handicapped patients, notably individuals who are blind or deaf. Indeed, psychological testing of the blind and deaf has become a specialty area with an extensive literature (e.g., Dye, Baril, & Bavelier, 2007). Regarding cognitive function itself, some tests do not have adequate norms particularly for very old patients, and it often becomes necessary for the tester to make a judgment regarding whether it is appropriate to use a standard adult test or one of the tests that have been specifically designed for use with the elderly. In the case of elderly individuals with substantial dementia, it is often only possible to use a mental status examination, such as the Folstein Mini Mental State Examination (Folstein, Folstein, & McHugh, 1975) or the Mattis Dementia Rating Scale (Mattis, 1988), rather than the Wechsler Scales or other adult intelligence tests.

Psychologists working mainly in academic or industrial settings require certain specialized competencies. If the main purpose of the assessment relates to academic or vocational placement, classification, or counseling, there needs to be specialized knowledge in aptitude, interest, and psychoeducational testing. Severe psychopathology is usually not the major issue with clients in these settings, although the psychologist should be sensitive to its presence when it does occur. However, it is not unusual to find in the population of people who are referred for cognitive assessment in work or school settings people with learning disabilities or adult ADHD. It is now well established that these conditions, previously thought to occur only in children, may persist into adulthood and continue to produce significant disability (Katz et al., 2001).

Cognitive assessment of patients with psychosis is yet another specialty area. While this activity has blended substantially with clinical neuropsychology, thinking disorder in schizophrenia in particular remains a defined area of knowledge and research. Psychologists, who might not get involved in neuroimaging or related neurobiological procedures relating cognitive abnormalities to brain function, often have good reason to evaluate the cognitive ability of patients with schizophrenia. While the standard intelligence and psychoeducational tests are somewhat helpful in such assessments, it is generally more enlightening to utilize one or more of the many tests that have been specifically designed to evaluate thinking disorder in schizophrenia, or that have been extensively researched for that purpose. Probably the most commonly used group of tests of that type is sorting tests, notably the Wisconsin Card Sorting Test (Heaton, 1981). Other sorting tests sometimes used are the Goldstein–Scheerer Tests and the Hanfman–Kasanin Concept Formation Test (1942). Patients with schizophrenia characteristically have a difficulty with abstract reasoning, failing to either form or identify concepts or conceptual rules based on experience. Sorting tests evaluate the ability to classify objects on the basis of development of a rule (e.g., the objects can be divided on the basis of shape or color). Recently, a new battery of tests called MATRICS has been published that constitutes a battery of cognitive tests found by extensive research to be highly sensitive to thinking disorder in schizophrenia (Green & Nuechterlein, 2004). The clinician who works with patients with schizophrenia should be competent to interpret these specialized tests in addition to the standard tests of intelligence and achievement.

Another consideration regarding competence aside from personal experience, knowledge, and education is standards for designating individuals as describing themselves as clinical psychologists or clinical neuropsychologists. This matter is generally dealt with through the establishment of definitions and adoption of those definitions by appropriate administrative bodies. In our case, we consider the definitions of clinical psychologist and clinical neuropsychologist, and their endorsement by the APA. In essence, the process is one of answering the questions "What is a clinical psychologist?" and "What is a clinical neuropsychologist?" This matter of definition has become one of increasing importance since forensic qualification of expert witnesses and granting of clinical privileges in institutional settings are becoming increasingly involved with documentation that the clinician is what she or he says she or he is.

There are two definitions of clinical psychologist, one more administrative and the other more involved with the actual content of the field. The administrative definition is that a clinical psychologist must have a doctoral degree (Ph.D. or Psy.D.) in clinical psychology from an APA-approved or regionally accredited program, and an internship in clinical psychology equivalent to one full-time year in duration. The more descriptive definition for assessment is that clinical psychologists determine the nature, causes, and potential effects of

personal distress, personal dysfunctions, and the psychological factors associated with physical, behavioral, emotional, nervous, and mental disorders. Examples of assessment procedures include interviews, behavioral assessment, and tests of intelligence, aptitudes, and personal characteristics.

The definition of clinical neuropsychologist is somewhat more complicated because of the absence of a consensus in the field, with different constituencies advocating somewhat different definitions. The most succinct definition of those offered is as follows:

▶ A clinical neuropsychologist is a professional psychologist trained in the science of brain behavior relationships. The clinical neuropsychologist specializes in the application of assessment and intervention principles based on the scientific study of human behavior across the lifespan as it relates to normal and abnormal functioning of the central nervous system. (Barth et al., 2003, p. 161)

This definition is obviously quite different from that of a clinical psychologist, and would appear to be more akin to the original Boulder "scientist-practitioner" model than the Vail "practitioner-scholar" model. More elaborate definitions have been published containing more detail about educational requirements, licensure, postdoctoral experience, and the role of Board certification. Recent deliberations involving the neuropsychology societies and the APA Commission on Accreditation have developed the consensus that specialized training in clinical neuropsychology should be at the postdoctoral level following completion of a Ph.D. or Psy.D. in psychology. In the large majority if not all cases, individuals admitted to postdoctoral programs received their doctoral degrees from APA-accredited programs in clinical psychology. In the future it appears that designation as a clinical neuropsychologist will require completion of a 2-year accredited postdoctoral program.

9.3   Expert Competencies of the Clinician

9.3.1   General Considerations

The definition of expertise is a controversial matter, particularly in clinical psychology and neuropsychology. From the standpoint of personal qualifications, the extreme view is that individuals judged to have expert competencies should be Board-certified Diplomates in clinical psychology or clinical neuropsychology. Since only a small percentage of psychologists in these specialties are Diplomates, this view is often challenged and expertise is evaluated with a number of other criteria. Complicating the Diplomate issue further, there is more than one Board, both in clinical psychology and clinical neuropsychology. While only Boards associated with the American Board of Professional Psychology (ABPP) are listed in the Membership Directory of the APA, there are many advocates of other Boards that believe that their credentialing is as rigorous and meaningful as that of ABPP. In clinical neuropsychology, there is an ABPP-sponsored Board (the American Board of Clinical Neuropsychology [ABPP/ABCN]) and an independent Board, the American Board of Professional Neuropsychology (ABPN). The National Register of Health-Care Providers in Psychology lists both Boards while the APA only lists ABPP/ABCN in its Membership Directory.

Expertise in assessment is often defined in terms of referral. Expert clinicians are those recognized as having particular competence in some area, and who have advanced capabilities in working with particularly difficult cases. Thus, when a diagnosis is unclear or the case is

made particularly complex because of a large number of complicating factors, an expert is sought for consultation. The process is somewhat analogous to a general practitioner physician making a referral to a Board-certified specialist. Sometimes there is a hierarchy in which particular specialists have a reputation for being outstanding in their areas. Within psychology, consumers may seek the services of a Diplomate to help assure that they will receive an expert-level evaluation. In forensic matters, there is often a process of "qualifying" expert witnesses, and Board certification is often used to support a witness's credentials.

Expertise is sometimes evaluated by whether or not the psychologist is a Fellow of the APA. APA policy is that Fellowship is an honor given to the members who have made unusual and outstanding contributions to psychology that have a national impact on the field. This policy is observed in both clinical psychology and clinical neuropsychology, although the specific criteria differ. Drawing a correspondence between Fellowship and expert clinical competence is more difficult than is the case for Board certification because Fellowship may be granted for research productivity or outstanding services to the profession. Memberships in honorary societies such as the American Psychopathological Association or the Society for Research in Psychopathology are also indicators of advanced expertise.

Aside from general personal qualifications, expertise may be evaluated on the basis of competence in specialized areas of assessment. These competencies may be divided into methodological, test, and clinical areas.

9.3.2   Methodological Competencies

We can divide this area into two components, one being test construction and development and the other psychometric analysis of tests. The writing of a new test requires a combination of creativity and technical expertise. Writing the test including making up the items requires particular expertise in its content area. Test items may be words, numbers, photographs, geometric forms, or more unique materials such as faces with differing emotional expressions, film clips of interpersonal behavior, odors, or pictures of doors. The creativity of Rorschach was expressed in his test that used ink blots as the content. A part of the Wechsler scales uses cartoons and line drawings. Cognitive tests generally involve words, numbers, geometric forms, and sometimes graphic material such as line drawings. Thus, the test constructor usually has to organize a team of media people who may be commercial artists, photographers, printers, and, more recently, computer specialists. Once a draft test has been designed, there follows the complex task of developing it for use through devising a scoring system and obtaining preliminary data for such purposes as ranking items by difficulty, modifying unsatisfactory items, and performing a large number of psychometric tasks such as scaling, determination of validity and reliability, and standardization in the target population. In current practice, this process can rarely be accomplished by an individual and typically the work is done by a test publisher or individuals under contract to test publishers. The competencies needed to be a test constructor go substantially beyond those needed for a test user, including aspects of creativity, scientific expertise associated with the content of the test, organizational skills, and the technical skills required to do the standardization and numerous psychometric tasks required. Indeed, it seems that a subprofession has been established of test developers who mainly work for publishing corporations whose major job is creating new tests or revisions of established tests.

9.3.3 Psychometric Analysis

There is an established group of psychologists who did not develop new tests themselves, but who are well-known for the analyses they did of established tests. The most prominent component of this group is the factor analysts who used various forms of factor analysis, largely with normal populations, to determine the structure of sets of tests. This group has made a major contribution to theories of intelligence, and the factor structure of multiple subtest intelligence tests remains an important area of inquiry. The major question at one time regarded whether intelligence was a general, global ability (G) or a number of special abilities (s). The belief that it is one or the other has been abandoned, and it is now widely accepted that intelligence is multifactorial, based to a great extent on factor analytic studies of the Wechsler scales done by Jacob Cohen (1952). Intelligence is conceptualized as having a three-factor structure including verbal reasoning, perceptual organization, and attention, sometimes called "freedom from distractibility." More recent formulations have proposed four factors, separating attention into working memory and processing speed. Other theoretical considerations have led to the view that there is "crystallized" and "fluid" intelligence, the former involving preserved information and the latter adaptive problem solving. There are numerous other theories of intelligence, but it would probably be fair to say that most contemporary clinical psychologists use the three-factor model, explicitly or implicitly, most readily evaluated through use of the Wechsler intelligence scales.

Of particular interest to clinicians are the numerous factor analytic studies of different diagnostic groups. The aim here is usually to determine whether the factor structure of the group under study is the same as that found in the normal population. For example, do individuals with schizophrenia have the same organization of abilities as normal individuals? In recent years this work has been supported by application of confirmatory factor analysis that permits testing of specific hypotheses about factor structure (Allen et al., 1998).

Individuals doing this kind of work typically have substantial competencies in cognitive psychology, mathematics, and advanced statistics. The clinician, who may never do a factor analysis, should nevertheless possess knowledge of the work done with it in the study of cognitive tests. Such work helps provide an understanding of what the tests measure, which would necessarily be pertinent to clinical evaluation.

9.3.4 Test Competencies

Some psychologists have particular expertise for some particular test or test battery. At the most advanced stage either they invented the procedure themselves or published extensively about it, often in the form of books. In personality assessment, we know of many books concerning the Rorschach or Thematic Apperception Test, or the MMPI. In cognitive testing there is similar material including books written about the Bender–Gestalt Test, the tests developed by Arthur Benton and the Goldstein–Scheerer tests (Goldstein & Scheerer, 1941). In clinical neuropsychology there is a voluminous literature concerning the Halstead–Reitan Battery. It has that double name because Ward Halstead originally developed the battery and his student Ralph Reitan supplemented it and did major research demonstrating its clinical application. Thus, while Reitan published studies of patients with numerous disorders, it is probably fair to say that his major reputation lies in his work with the Halstead–Reitan Battery. The same point

can be made for David Wechsler who while doing other work remains most recognized for his intelligence scales.

In clinical practice, referrals are sometimes made to clinicians because they are known to have expertise in some particular test or battery. That is, the consumer specifically wants her or his patient to get the Halstead–Reitan Battery or some specific battery of psychoeducational tests. In clinical neuropsychology, there are in fact clinicians who use the Halstead–Reitan Battery only. Expert status in a particular test or battery has become problematic with regard to competency because of training issues that have been raised. It is assumed that when training and the period of supervised experience have been completed, the psychologist can independently use the standard assessment procedures in everyday practice, without the necessity of further supervision or training. However, when expertise is claimed in some particular procedure, especially when that procedure was not taught in graduate school or postdoctoral training, a question may be raised about competence and qualifications. Should a clinician set up an office or laboratory for some procedure in which expertise is claimed without specific training in that procedure? In neuropsychology, should a clinician use the Halstead–Reitan Battery, the Luria–Nebraska Battery, or the Boston Diagnostic Aphasia Examination without specialized training in these procedures? A proposed solution to the problem has been use of continuing education methods, notably workshops in which these procedures are taught by established authorities. For example, workshops have been available in the Halstead–Reitan Battery for many years. There now seems to be a consensus that these specialized procedures should not be offered by otherwise well-qualified psychologists who have not, at least, received such education. Other critics have stated that workshops are not sufficient, and that procedures like the Halstead–Reitan Battery or comprehensive aphasia examinations should not be used by individuals who do not have the basic neuroscience background to understand the conditions being diagnosed. As a recommendation, it could be suggested that clinicians claiming expertise in specialized procedures should assure themselves that they are working within their scope of practice, and that they have appropriate experience and training for using those procedures. However, what is appropriate appears to remain a controversial matter.

9.3.5 Clinical Competencies

Some clinicians have particular expertise with certain kinds of patients. Some are highly competent in assessing patients with schizophrenia, some with posttraumatic stress disorder (PTSD) patients, and some with patients with physical disabilities or other diagnostic or conditional characteristics. In this case, the referring consumer sends the patient to the clinician not so much to receive particular tests but because the clinician is particularly knowledgeable about, or sensitive to, the disorder the patient has and can work effectively with the patient. Some clinicians, mainly those who work in specialty clinics, only see patients with the same disorder or who are being evaluated for the same disorder. In these cases, knowledge about the disorder is an obvious area of competency, and the clinician should have extensive experience with patients with the disorder. In the area of cognitive assessment of psychiatric patients, there would be particular concern about serious mental illnesses, particularly schizophrenia, in which disorders of thinking are cardinal symptoms. Individuals with autism also have a unique cognitive profile that the clinician should be able to detect. Clinicians who have worked with children and adults with autism should recognize this characteristic profile, while clinicians

who have not been around people with autism much might miss it, or might identify it but not associate it with the autism.

Competency in assessment of some particular group relies heavily on experience. While efforts have been made to generate prototype cognitive profiles for different diagnostic groups they have been mainly unsuccessful. Taking schizophrenia as an example, adult individuals with schizophrenia may have IQs that essentially span the entire range of intelligence, and there does not seem to be any characteristic subtest profile. However, even with average or above intelligence, they may show clearly identifiable abnormalities on tests of conceptual ability, such as the Wisconsin Card Sorting Test. Results of this test also span a considerable range, and there is a small group of individuals with schizophrenia who produce a normal performance on this test, although that performance may be reduced relatively to a previously higher level. In essence, schizophrenia is a cognitively heterogeneous condition (Palmer et al., 1997), and cognitive tests really cannot be used to determine if one is schizophrenic or not. They are used differently by experienced clinicians in regard to such matters as prediction of functional outcome, level of competency, and rehabilitation planning.

Some clinical neuropsychologists may only evaluate patients with known or suspected brain damage. They may use different tests or batteries, but the purpose of the evaluation is the same. In some cases, the practice is quite specialized, as in the case of clinicians who work on a stroke or neurosurgical service, or more general as with clinicians who have an office practice. The competencies between these two situations are somewhat different with the more specialized clinicians having to know a great deal about the patients they are serving. For example, working on a stroke unit requires that one knows about aphasia, specific constructional disorders, and movement disorders. The clinician in office practice must have knowledge of a variety of disorders, but perhaps with more of an emphasis on head injury, developmental disorders, and disorders of the elderly. Competencies therefore need to be "fine-tuned" to the pattern of referrals the clinician receives. Characteristics of supervised experience would appear to be important here. Training on a surgery ward in an acute care hospital would seem to be poor preparatory training for working in an office practice in the community, and the reverse would also be true.

9.4 Substantive Competencies for Cognitive Assessment of Adults

9.4.1 Clinical Cognitive Assessment

Here, we will consider some of the specific competencies typically needed for practice by clinical psychologists,

9.4.2 Intellectual Assessment

Probably the most common form of cognitive assessment done by clinicians is intelligence testing. Doctoral-level training should include course and practicum experience in intelligence testing, and intelligence testing should be done with patients during the internship. Course work should consider theories of intelligence, psychometrics, and descriptions of the individual

and group intelligence tests available. Clinical training involves knowledge of intelligence of various diagnostic groups including the traditional area of mental retardation and extending to learning disabilities, other developmental disorders, and psychiatric disorders. The role of socioethnic and gender considerations should be covered. While several individual test batteries are available, the common use of the Wechsler scales would appear to make it fair to require all clinical psychology graduate students to be familiar with it. The clinician may choose not to do intelligence testing but if she or he does, there should be some knowledge of the Wechsler scales even in the rare cases in which it is not used in practice. Even if it is not used, there is the matter of communicating with colleagues who are likely to use it. As indicated, high levels of competency in intelligence testing are associated with psychometric expertise, an unusually good understanding of particular disorders, or a high skill level in the kinds of diagnostic assessments that are associated with clinical neuropsychology. The skilled clinician should also be able to productively integrate intelligence test results with results of personality, interest, and achievement tests.

9.4.3 Psychoeducational Tests

In the past, competencies in the use of educational achievement tests was only thought to be pertinent for psychologists working with children, but several considerations now encourage such competencies in working with adults. First, it is now well established that learning disability may persist into adulthood, and it is often of value to assess adults for that condition. Second, academic achievement level has been shown to be a reasonably good predictor of premorbid level in individuals who become mentally ill or cognitively impaired because of structural brain damage. In schizophrenia research, there has been extensive use of achievement tests as predictors of premorbid level, in combination with other cognitive tests. It is also useful to establish literacy level for adults for counseling purposes. The difficulty in the past is that there were not psychoeducational tests normed for adults, but that is no longer the case. There are now "wide-range" tests available, the most popular one being the Wide Range Achievement Test (WRAT) (Jastak & Wilkinson, 1984) which assesses reading, spelling, and arithmetic and is usable across the adult age range. There is also the Wide Range Assessment of Memory and Learning (WRAML) (Sheslow & Adams, 1990) which may be used up to age 17. Clinical psychologists should have such tests in their repertoire.

9.4.4 Cognitive Tests

There is a large number of tests of specific cognitive functions, but a relatively small number of them are used by clinicians for assessment of patients. Probably the most commonly tested areas are abstract reasoning or executive ability, attention, and memory. These tests have some overlap with intelligence tests but differ in that they focus on some specific ability in detail. The most commonly used of the abstract reasoning procedures is the Wisconsin Card Sorting Test. It involves conceptualizing a principle based on exposure to a series of stimuli, in this case colored geometric forms that can be sorted by size, color, or number. A crucial part of the test assesses the person's ability to shift concepts when the contingencies change (e.g., color becomes relevant replacing shape that was previously relevant). Verbal abstract reasoning may be tested

with proverbs or analogy tests. Tests of abstract reasoning are mainly used in detecting structural impairment of brain function and thinking disorder in schizophrenia. Its assessment is a key component of any cognitive assessment of patients being evaluated for brain damage or schizophrenia.

Tests of attention are of particular value in assessment of individuals with significant problems involving distractibility, inability to concentrate, and impulsivity. While it can be evaluated with the arithmetic and digit span subtests of the Wechsler scales, when a more detailed analysis of attention is needed, as in the evaluation of a client for ADHD, it is desirable to use a continuous performance test (CPT) or related procedure. The CPT involves measuring reaction time usually to stimuli viewed on a screen under varying conditions. For example, the client may be asked to push a button only when the letter A appears or when an A is followed by an X. There are several published tests of this type (e.g., Conners, 2000), and psychologists who see ADHD patients in particular should be competent to use them.

9.4.5 Formal Testing of Memory

Assessment of memory is important for several areas of assessment including identification of neurologically based amnesic disorders, evaluation of mental deterioration, detection of memory difficulties associated with mood or anxiety disorders, and claims of memory failure that require documentation, sometimes in association with litigation. The most widely used adult memory tests are the Wechsler Memory Scale and the California Verbal Learning Test. The Wechsler Memory Scale contains both verbal and visual memory sections, and has recently been expanded, now constituting what may be described as a memory battery. Clinical psychologists should have the capability of interpreting memory tests on the basis of knowledge of the psychology of memory. That is, concepts such as immediate, short-, and long-term memory, working memory, encoding, storage and retrieval, differences between verbal and visual or spatial memory, and retroactive and proactive interference should be understood by the psychologist and used in interpretation of memory tests. Clinically, in combination with an intelligence test, there should be the capability of evaluating memory problems of the elderly and patients who suffered from traumatic brain injury. Patterns of recovery and deterioration should be assessed as appropriate.

9.5 Substantive Competencies in Clinical Neuropsychology

We have taken the position that cognitive assessment and clinical neuropsychology are two different specialties, although they may both use some of the same procedures. In making the distinction, we have the benefit of the Houston Conference, which like the Boulder and Vail conferences before it for clinical psychology presented a description of what ideally should make up the training of clinical neuropsychologists. As indicated, clinical neuropsychology was designated as a specialty in 1996 and there is an APA Division of Clinical Neuropsychology with almost 4,400 members. According to Houston Conference standards education at the doctoral level to become a clinical neuropsychologist includes: (1) a generic psychology core including statistics, methodology, learning, cognition, perception, social psychology, biological basis of behavior, life span development, history, and cultural and individual differences

and diversity; (2) a generic clinical core including psychopathology, psychometric theory, interviewing and assessment techniques, intervention techniques, and professional ethics; (3) foundations for the study of brain–behavior relationships including the neurosciences of basic human and animal neuropsychology, functional neuroanatomy, neurological and related disorders (clinical neurology) including etiology, pathology, course, and treatment, and non-neurological conditions affecting central nervous system (CNS) function; (4) neuroimaging and other neurodiagnostic techniques, neurochemistry of behavior including psychopharmacology and neuropsychology of behavior; (5) practice of clinical neuropsychology including specialized neuropsychological assessment and intervention techniques, research design, and analysis in neuropsychology, professional ethics and issues in neuropsychology and practical implications of neuropsychological conditions.

It is now the general consensus that the formal educational and experiential requirements for practice require the addition of 2 years of postdoctoral training following completion of a Ph.D. or Psy.D. doctoral program. While not specifically stated, most students going on to this residency period have doctoral degrees in clinical psychology from APA-accredited programs. An organization has been formed that coordinates the activities of the postdoctoral programs called the Association for Postdoctoral Programs in Neuropsychology (APPN). The Houston Conference standards contain elements that would be important for both clinical psychology and clinical neuropsychology, which are included mainly in the generic core items. The major difference appears to be the neuroscience items. Clinical neuropsychologists are expected to have high levels of expertise in brain function and pathology. Current training standards recommend that this expertise should be gained with formal instruction as well as on-the-job experience. Student clinical neuropsychologists are expected to take courses in neuroscience, which may include functional neuroanatomy, neuropathology, pharmacology, and various aspects of neurobiology which might include neurochemistry, neurophysics, and neurophysiology. In recent years the study of genetics has become increasingly important. Course work or supervised experience should provide a background in neuroimaging, such that the student learns about magnetic resonance imaging (MRI), computed tomography (CT) scanning, and other neuroimaging procedures. Individuals without this background generally do not have the competencies to relate behavioral data to their associations with brain function and pathology. In earlier generations, clinical psychologists were usually limited to inferences concerning presence or absence of "brain damage" or to distinguishing between neurological and functional disorders. It is noted that during those previous generations there was the commonly held belief that such disorders as schizophrenia and autism were functional conditions and distinguishable for that reason from the "organic brain syndromes" based upon brain disease or injury. That view is no longer viable, and the current common wisdom has changed to the view that disorders such as schizophrenia and autism are neurobiological disorders with possible genetic components. Therefore, clinical neuropsychologists, while still concerned with the matter of presence or absence of brain pathology, are largely involved in determining relationships between behavioral, neuropsychological assessment findings and status of the brain including location of damage, type of damage, and system that might be involved.

Another major difference between clinical psychologists and clinical neuropsychologists has to do with practice patterns. While some neuropsychologists practice in psychiatric settings, large numbers of them practice in general medical facilities, particularly in neurology, neurosurgery, and geriatric departments. The assessment component of these practices generally involves the use of specialized neuropsychological tests or test batteries. Tests used generally

include some procedures that are not neuropsychological tests with regard to detection of status of brain function. These relatively neuropsychologically insensitive tests are used to help establish baseline functioning or premorbid status, providing an assessment of how the patient functioned before onset of the brain disorder. Thus, for example, it is often desirable to administer the entire Wechsler intelligence scale because while some of the subtests are quite sensitive to brain dysfunction some are not, thereby providing baseline information.

The clinical neuropsychologist is expected to be competent at neuropsychological test or test battery interpretation, although there are a great many such tests in the literature and the choice of tests depends upon the training and orientation of the neuropsychologist. As a general consideration some use a "fixed battery" in which the same tests are given in the same way to all patients, while some use a "flexible" battery in which individual tests are selected on the basis of information in the clinical history or the referral question. Often the method learned during doctoral training or the internship is what the clinician carries into practice. However, all clinical neuropsychologists are expected to be competent in some systematic method of performing a neuropsychological assessment. Within that framework, any degree of claim of competence at some particular method of assessment should be supported by the appropriate training. If one uses the Halstead–Reitan Neuropsychological Battery, its use in practice should be supported by training and ideally supervised experience in its use. If one does assessment online during neuroimaging, appropriate training to do so should have taken place. This training may take place in graduate school or during the internship or residency, but practicing clinicians often develop new competencies through continuing education courses or workshops, or through working with a competent colleague for a period of time.

The considerations raised here are not mandatory, and we know of no specific licensure or other legal requirements that limit the use of the term clinical neuropsychologist to those who have the training and qualifications described above. The Houston Conference standards have been described as aspirational and not a set of policies that would be immediately implemented. However, it has become increasingly difficult to meet eligibility standards for Diplomate status without postdoctoral training, and many institutions recruiting neuropsychologists state in their advertisements that they will only consider individuals who meet Houston Conference standards.

This matter is associated with the controversial issues of the distinction between a proficiency and a specialty. A proficiency is a specific skill in an area within a specialty. For example, a clinical psychologist may have a proficiency in the MMPI obtained through education in combination with clinical experience. Individuals who attend workshops that qualify for APA-approved continuing credit and apply what they have learned in practice may claim to have proficiency in the area covered by the workshop. A specialty is a broad area of competence that defines the entire scope of one's professional practice. One can have numerous proficiencies within a specialty (e.g., a clinical psychologist can have a proficiency in the MMPI). It has been argued by some that clinical neuropsychology is a proficiency within clinical psychology. An established clinical psychologist can become proficient in clinical neuropsychology through continuing education, usually involving workshop attendance, reading, and supervised experience. Within clinical neuropsychology before its establishment by APA as a specialty, it was the only means available, but during the debate concerning whether it should become a specialty, the argument was made that it should remain within clinical psychology as a proficiency. Ultimately the view that it should be a specialty prevailed, but problems remained.

There were apparently some clinical psychologists who became proficient in an area, for example, administration and interpretation of the Luria–Nebraska Neuropsychological Battery, through attendance at a workshop and associated reading and experience. Other psychologists criticized this practice, indicating that many of these individuals did not have the background in neuroscience and neuropathology described above to competently do neuropsychological assessment. Furthermore, there were more traditional clinicians who expressed the view that any practicing clinical psychologist should have the skills to perform a competent assessment of brain-damaged patients. This dilemma persists, with no mandatory requirements for designation as a clinical neuropsychologist and insufficient time to allow for graduation of individuals with doctoral degrees from APA-accredited programs in clinical neuropsychology. Establishment of certifying Boards, the Houston Conference, and current efforts to produce written standards of practice are now under way, but they remain works in progress (AACN, 2007). At a local level, granting of clinical privileges and defining scope of practice also may contribute to the process of developing more, well-defined competencies.

9.5.1   Transition from Basic Competencies to Expert

Several forces appear to be acting to produce rapid changes in how competency is evaluated in psychology. There are general matters, such as the movement toward evidence-based practice, the growth of clinical psychology through the establishment of the still new professional schools, and the increased presence of psychology in forensic work. The growing movements toward obtaining informed consent from clients, requirements concerning licensure, clinical privileges, and scope of practice have also played roles. Within the field of cognitive assessment, we have tried to show how Draconian changes in the field have accompanied the rapid growth of clinical neuropsychology. Change seems inevitable as graduates of professional schools and specialized programs in clinical neuropsychology account for increasing proportions of psychologists in clinical practice. The APA and the examining Boards are becoming increasingly concerned with the matter of standards of practice, and are active producing documents in that area stating policy and goals.

In general, there appears to be a trajectory in the direction of increased emphasis on evidence-based practice in both the treatment and assessment areas. Cognitive assessment has always had a tradition of quantitative evaluation, but now there is an increasing concern with ecological as well as psychometric validity regarding the capacity of tests to predict adaptive behavior in the environment. Cognitive tests are now commonly used in forensic applications and clinical trials, thereby creating a need for clinicians to develop competencies in these areas (Larrabee, 2007). Particularly in the forensic field, there is a growing concern with malingering, and evaluating how to determine whether the client is exerting her or his best effort, and special tests and procedures have been developed for this problem. Clinicians are now expected to make reasonable judgments about whether their clients were feigning illness or not doing their best on tests. New tests and procedures derived from existing tests have been developed to deal with that matter, and it is assumed that especially in forensic applications psychologists are competent to use these methods. Extensive research on malingering has been published in recent years.

Use of cognitive testing in clinical trials of medications and other treatments has become more common, leaving the field with the now widely recognized practice-effect problem.

Many cognitive tests are not repeatable because after taking the test once and learning the right answers, subsequent testing may be spoiled. A body of literature has emerged identifying these effects and devising methods to reduce them. Clinical trials have always been required for new medications, but the emphasis on evidence-based treatment has generalized its use to other treatments. Repeated testing has become an important part of treatment monitoring. Two approaches have been taken to the problem, one involving statistical correction and the other identification or development of tests that are resistant to practice effects. An example of the latter approach is the development of MATRICS, a cognitive assessment procedure specifically designed for clinical trials with patients with schizophrenia (Green & Nuechterlein, 2004). The subtests of MATRICS were chosen not only because of their sensitivity to thinking disorder in schizophrenia, but also because they were resistant to practice effects. For those reasons, MATRICS will hopefully be a good procedure for clinical trials with schizophrenia patients. Future psychologists involved in the monitoring and evaluation of treatment will need to develop competencies in the management of practice effects.

There appears to be a trend in intelligence and other cognitive testing to associate test materials with appropriate aspects of cognitive theory. Thus, on the Wechsler scales we have gone from the distinction between verbal and performance intelligence to the most recent edition of the scale (Wechsler, 2008) in which there is now consideration of those constructs as well as attention, working memory, and processing speed. Specific subtests are now frequently interpreted in terms of specific cognitive processes. For example, on Block Design the distinction may be made between synthetic errors in which there is difficulty maintaining the contour of the block pattern and analytic errors in which the total pattern cannot be divided conceptually into separate blocks. Another example is the California Verbal Learning Test from which scores that are based upon constructs from the psychology of memory may be derived. For example, the effects of retroactive interference can be evaluated or characteristics of the learning curve can be described. It is probably fair to say that psychologists doing cognitive assessment will have to gain increasing competence in relating test results to pertinent cognitive theory.

At the time of this writing clinical neuropsychology is a new specialty, and it is not now possible to point to an established structure of training programs and patterns of practice that exist for clinical psychology. One might say that the game plan is there, but it is far from implementation.

Goals already achieved include establishment of several membership societies, creation of an extensive research literature contained in part in a number of neuropsychology journals and numerous books, recognition by the APA of clinical neuropsychology as a specialty area, drafting of educational standards based on the Houston Conference, establishment of Diplomate Boards, and establishment of over 50 postdoctoral training programs at various hospitals and medical schools throughout the country. The proceedings of the Houston Conference, in particular, provided at least a working statement of the competency requirements for describing oneself as a clinical neuropsychologist. The postdoctoral programs have been graduating people for some time who have begun practice.

A key remaining problem is the absence of APA accreditation of the postdoctoral programs. While it is possible to obtain it, several obstacles appear to have prevented its occurrence except in a very small number of programs. Currently, clinical neuropsychologists are often hired by institutions that only employ APA-accredited graduates as clinical psychologists;

most of the graduates of the postdoctoral programs have an APA-accredited Ph.D. or Psy.D. degree in clinical psychology. While the APPCN, the organization of postdoctoral programs, has rigorous standards for admission to programs and their content, it does not have the status of an official accrediting body. Thus, competency standards are not yet mandatory, but strenuous efforts have been made to promulgate appropriate standards through various channels. Another problem involves sheer number since it will be a long time before the journeyman clinical neuropsychologist in the field will always have formal postdoctoral training in clinical neuropsychology. Most clinical neuropsychologists in practice at present gained their competence between a combination of predoctoral education and postdoctoral continuing education, generally involving course, workshops, reading, consultation with colleagues, and practical experience.

The matter of evaluating competency on the basis of achieving Diplomate status is problematic, particularly in recent years when there has been a proliferation of Boards, several of which accredit psychologists who do assessment work. The Boards have their advocates and critics, and there appears to be a continuing rivalry among them. Within assessment, there are the two neuropsychology Boards (ABCN/ABBB and ABPN), the ABPP clinical psychology Board and the American Board of Assessment. Membership in Boards appears to be increasing, but it is a matter of conjecture if large numbers of practitioners will become Board-certified in the future. Some Boards have been characterized as "Vanity Boards," having minimal admission requirements, and the public may be confused about which Boards actually represent exceptionally high levels of competence. The Board issue remains problematic for the field, and it is probably not wise to view Board certification as a sole criterion for competence or for expert status (Goldstein, 2006).

9.6   Summary

In summary, the psychologist of the future involved in cognitive assessment will be a psychologist trained in the scientist-practitioner model with a Ph.D. degree, the practitioner-scholar model with a Psy.D., or a clinical neuropsychologist with postdoctoral training and expertise in brain function. Competencies vary among the three, but there appears to be a common core of increased concern with evidence-based practice, maintenance of ethical and professional standards that define scope of practice, and, in our opinion at least, an increased concern with the scientific basis of one's practice. Areas of increased concern in recent years have been the ecological validity of cognitive tests, malingering and reduced effort, and the use of repeated cognitive testing in clinical trials. Future psychologists doing assessment work should be trained in these areas and are likely to be expected to have competencies in them.

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10 Cognitive Assessment with Children

Jennifer R. Bailey · Alan M. Gross

Abstract: The aim of this chapter was to provide a comprehensive overview of the process of child cognitive in children. Following a brief overview of the area, basic clinician competencies were discussed. The four core areas of clinician competency outlined by the APA task force were delineated. These areas include having a basic understanding of psychometric theory; knowledge of ethnic, racial, cultural, gender, age, and linguistic variables; knowledge of how to test individuals with disabilities; and supervised experience. Following this brief discussion, an example of a basic psychoeducational test battery was explored. Test administration guidelines, test selection, and test interpretations were discussed. Additionally, suggestions were provided for enhancing rapport with the child and increasing the readability of the written assessment report. An overview of a typical assessment report was also provided. This example offered a broad picture of the assessment process, beginning with identifying the referral question, the child's background (general, educational, family history, medical background, and psychological factors), behavioral observations, and presenting the test results. A discussion on clinician competency in ethnic and cultural issues, gender and age, and linguistic variables was also offered. Another section of the chapter highlighted factors associated with the development of expert assessment competencies. Clinician competency was explored in the context of the examination of test batteries for several of the most common types of child assessments. The section on expert competency ended with a trajectory for obtaining the necessary skills to proficiently work with children. Finally, suggestions concerning how best to provide the training clinicians need to achieve competency were explored.

10.1 Overview

Cognitive assessment is an important component of diagnosing learning and behavior problems in children. Intellectual deficits and learning disabilities (LDs) may have an adverse effect on a child's ability to comprehend and retain information (Krishnamurthy et al., 2004). In addition to diagnosing learning and behavior problems, cognitive assessments also play an important role in academic placement decisions (e.g., special education, gifted programs, etc.) (Krishnamurthy et al., 2004; Sattler, 2008). Assessment is a method that allows teachers, parents, and clinicians to gain an understanding about a particular child's capabilities in order to facilitate informed (academic and training) decisions (Sattler, 2008). Most frequently, assessments are used for evaluating the progress of children's academic/cognitive development. Teachers and parents may request testing to identify if a child has a specific cognitive or learning deficit (such as a reading or LD). Intellectual and achievement tests provide a context through which a child's strengths and weaknesses can be ascertained and are used frequently with school-aged children in order to determine if they meet the requirements for additional special school services or placement into gifted programs.

The need for clinicians with clinical competency in cognitive assessment of children is great due to the number of school-aged children in USA receiving Individualized Education Programs (IEPs). According to the National Center for Educational Statistics (2007), approximately 13.5% of children in USA between the ages of 3 and 21 were provided with special education services through the Individuals with Disabilities Education Act (IDEA) for various LDs and other health-related problems. Thus, approximately 6,686,000 children during the 2006–2007 school year participated in some form of psychoeducational testing.

According to the American Psychological Association (APA, 2000, p. 7), psychological assessment can be defined as a "conceptual, problem-solving process of gathering dependable, relevant information about an individual, group or institution to make informed decisions." In 2000, an APA task force outlined basic assessment competency guidelines. The guidelines suggested core skills necessary for ethical use of testing materials and qualifications for specific areas of testing. The basic skills are the fundamental abilities thought to be relevant and necessary for the administration and interpretation of all types of assessment tools. The Task Force on Test User Qualifications (TFTUQ) emphasized that these guidelines are of particular importance for clinicians using standardized assessment instruments for evaluating ability, achievement, and intellectual functioning of a specific population (APA, 2000). A standardized assessment tool is any form of measurement in which the intellectual, behavioral, and psychological characteristics of an examinee are obtained using a standardized method (APA, 2000).

The goal of this chapter is to provide an overview of clinician competency in the area of cognitive assessment of children. The APA task force delineated four areas of core knowledge and skills necessary for basic test-user competency. These skills include having a basic understanding of psychometric theory; knowledge of ethic, racial, cultural, gender, age, and linguistic variables; knowledge of how to test individuals with disabilities; and supervised experience. In addition to examining expert competencies, suggestions concerning how to best provide the training that clinicians need to achieve competency will be explored.

10.2 Basic Competencies

10.2.1 Psychometric Theory and Measurement

Psychometric theory and measurement provide the foundation from which psychological tools are developed. The psychometric properties of an instrument outline the basic structure of the instrument and provide a key for understanding the psychological constructs being measured (Cohen & Swerdlik, 2005). A benefit of having a basic foundation in test theory is that the knowledge of psychometric theory allows clinicians to have a comprehensive understanding of the measurement tools they use (e.g., item construction, item discrimination, etc.). It is important for clinicians to have a basic understanding of how the test items on the measure were derived as well as an awareness of item parameters. Item parameters include knowledge of item difficulty, item discrimination, and examinee guessing on items (APA, 2000).

It is important for clinicians to understand the nature of test development and what abilities the instrument is designed to assess. According to the APA task force, clinician competency in this core area includes knowledge of (1) descriptive statistics, (2) reliability and measurement

error, (3) validity and meaning of test scores, (4) normative interpretation of test scores, (5) selection of appropriate test(s), and (6) test administration procedures.

10.2.1.1 Descriptive Statistics

Competency in test administration and interpretation requires an understanding of descriptive statistics. Basic concepts such as means and standard deviations play an important role when comparing a child's scores to their normative peer group. Statistics such as correlations are often used to explain the relationship between intelligence test subtest scores. Additionally, knowledge of frequency distributions, characteristics of the normal curve, statistical concepts such as mean, median, mode, variance, standard deviation, and scale score transformations are important pieces of statistical knowledge vital for clinical success in the area of cognitive assessment of children (APA, 2000). The protocols used to score the various measures of intelligence are based on the above-mentioned statistical concepts. Standard deviations are used to determine the area under the normal curve where the child's performance fits (such as above-average or below-average intellectual abilities). Knowledge of scaled scores also allows for the child's percentile rank to be determined. For instance, on the Wechsler tests, the scaled scores are associated with a particular percentile rank which then allows for a suggested qualitative description for each of the scaled scores to be provided.

10.2.1.2 Reliability and Measurement Error

A benefit of understanding reliability and measurement error is that it allows clinicians to have a more comprehensive understanding of the instrument that they are using. Reliability provides an estimate of how accurate the test is at measuring a child's abilities from one testing time to another (Cohen & Swerdlik, 2005). Knowledge of instrument reliability is of particular importance in academic settings where children may need to have their academic skills assessed over a number of years. Similarly, measurement error provides clinicians with a framework from which they can understand the meaning of a given set of scores. The measurement error sets the upper and lower boundaries for a set of scores, allowing the clinician to provide the best estimate of the child's intellectual and/or academic abilities (APA, 2000).

10.2.1.3 Validity and Meaning of Test Scores

The validity of a particular assessment tool begins with the test makers during the construction of the instrument (APA, 2000). Construct validity reflects the evidence supporting the use of a given measurement tool for a particular psychological construct (Cohen & Swerdlik, 2005). That is, validity provides evidence supporting the notion that an instrument measures what it intends to measure. Competent clinicians must be able to evaluate whether assessment data accurately reflect a child's skills. Based on the skills outlined by the APA task force, competent clinicians must be able to understand the various sources

associated with a given test's validity and how the different sources of evidence influence the meaning of a particular test's set of scores.

10.2.1.4 Normative Interpretation of Test Scores

All standardized tests are normed by age group. Test norms provide a description of a set of scores within a particular population. As an example, the Wechsler Intelligence Scale for Children (WISC) was standardized on 2,200 children who were selected to be representative of children in the USA (Sattler, 2008). Standardization of intelligence and achievement tests by age groups allows for the consideration of developmental abilities. Performance expectations for each of the different tests (subtests) are based on what is developmentally appropriate. For example, children between the ages of 3 and 7 would not be expected to complete the same subtest items as a 13-year old.

Knowledge of how each child's individual test scores differ from those of the normative group form the basis on which clinicians identify intellectual strengths and weaknesses. Each time a set of test scores is to be interpreted or a particular assessment instrument is selected for use, clinicians must consider the descriptive characteristics of the normative group (i.e., age, gender, ethnicity, and region).

10.2.1.5 Selection of Appropriate Test(s)

As mentioned by the APA task force, competent clinicians must be able to select appropriate instruments. Clinicians must have knowledge in how to select the most appropriate version of a test or the most appropriate test for a specific purpose. The clinician's knowledge of basic test theory should form the basis of selecting the most appropriate test form.

The basic starting point in the assessment process is the referral question. Serving as the foundation on which the clinician bases the selection of testing materials, it provides information on the end goal of the assessment (Sattler, 2008). When reviewing the referral question, it is the responsibility of clinicians to make certain that they have a comprehensive understanding as to what is hoped to be gained from the assessment. A great way to determine the end goal is to ask the referring source (Sattler, 2008). For example, in a basic LD assessment, the most widely used test would include an intelligence quotient (IQ) and achievement test, along with parent and child interviews. However, if there is also a question concerning reading ability or reading difficulties, the administrating of a supplementary test of reading (e.g., Nelsen Denny) can help to specify the nature of the problem.

As just noted, the referral question along with the child's age, verbal abilities, developmental level, and psychometric considerations influence the instrument selection process. Provided below are examples of assessment instrument choices for a common referral question associated with the cognitive assessment of children.

Basic Psychoeducational Test Batteries

Basic psychoeducational assessments are designed to establish estimates of a child's intellectual and academic abilities. Typically in this type of assessment an intelligence test (e.g., the Wechsler scales: Wechsler Preschool and Primary Scale of Intelligence-Revised (WPPSI), Wechsler

Intelligence Scale for Children-Fourth Edition (WISC-IV), and Wechsler Adult Intelligence Scale-Third Edition (WAIS); Woodcock Johnson Test of Cognitive Skills-Third Edition (WJIII COG)), an achievement test (e.g., Wechsler Individual Achievement Test-Second Edition (WIAT-II), Woodcock Johnson Test of Achievement (WJ-III ACH)) as well as a clinical interview, behavioral rating scales, and other tests selected based on the child's presenting problem are administered. Additional tests of memory (Wechsler Memory Scale (WMS)), concentration (such as the Learning and Study Strategies Inventory (LASSI; Conner's Continuous Performance Test (CPT-II); Barkley Attention-Deficit Hyperactivity Disorder (ADHD) scales parent and teacher forms), or various other self- report measures (Beck Depression Inventory-II (BDI-II); Minnesota Multiphasic Personality Inventory-Adolescents (MMPI-A); Behavior Assessment System for Children-Second Edition (BASC-2)) may be administered in order to provide an accurate picture of the child's strengths and weaknesses in regards to the referral question.

10.2.1.6 Test Administration Procedures

In order to avoid compromising the integrity of assessment instruments, clinicians must be able to follow the standardized procedures outlined in the test's administration manual. In addition to being familiar with the administration procedures (e.g., following reversal and stopping procedures on a given subtest when a specific number of items have been missed; not divulging information about the actual answers, methods for scoring each item), procedural requirements also include maintaining the confidentiality of test information (i.e., test security).

The APA considers competency in basic test administration procedures an essential element of clinician competency. Proficiency in test administration must be more broadly defined than simply following standardization procedures during the administration of selected tests. As emphasized in this chapter, the assessment process begins with the referral, and clearly the referral question will be a variable in test selection. However, the initial decision the clinician must make is whether or not to accept the referral (Sattler, 2008). It is the responsibility of the clinician to determine if a comprehensive assessment is necessary for a given child. Consideration of the nature of the problem, learning environment, maturation level, and parental expectations should provide the content for determining if the youngster is experiencing serious difficulties or whether the target behavior represents a transient response pattern, or deviation within developmentally normal limits (Mash & Wolfe, 2005). Clinicians must also recognize the limits of their competency, and referrals requiring skills that fall outside a clinician's training should be referred to a more appropriate provider.

Cognitive assessment is multifaceted and, as such, requires a comprehensive understanding of the child. Prior to meeting with the child, it is useful to gather information from several sources in order to obtain a complete understanding of the presenting problem (Allen & Gross, 1994). Interviews with the child, parents, teachers, or significant others often provide valuable insight into factors associated with the problem. These factors may include various environmental variables such as recent changes in family environment, recent death in the family, divorce, birth of a sibling, recent move, or significant family illness (Allen & Gross, 1994). Children are particularly vulnerable to changes that occur within their environment, and as such, it is important to determine the impact of the environmental context on the child's presenting problem.

During the parental interview, the clinician should ask parents to address the specific behaviors that they are interested in the child being able to perform. Asking parents about their assessment expectations will aid the clinician in determining what assessment tools to use, as well as provide guidance when writing the recommendation section of the written report. Furthermore, it is important for clinicians to ask questions about the frequency, duration, and intensity of the presenting issue. The initial parental interview also allows clinicians to evaluate other contextual pieces that may be important for answering and understanding the referral question (Boggs, Griffin, & Gross, 2003). During the parental interview, clinicians obtain a comprehensive developmental and family history. This would include information on the child and family's medical history, family history of psychiatric illness, difficulties during pregnancy and child's achievement of the various developmental milestones (Boggs et al., 2003).

Interviewing other individuals in the child's life may also be beneficial allowing a broader picture of the child's presenting problem. Teachers often provide the best additional source of information. The teacher will be able to provide a description of the problem or the problem responses seen in the classroom setting and methods that have been used in attempts to address the problem (Schwean & Saklofske, 2005). Specific questions as to the child's performance in class, on homework, during free-play activities help provide a complete picture of the child (e.g., does the child complete her homework regularly and in a timely fashion? Does the child have trouble staying on task during structured and/or unstructured classroom activities?) (Schwean & Saklofske, 2005). If the child is being referred for testing by his or her school, the clinician should determine if any corrective or instructional methods (e.g., tutoring, extra resources) are in place (Sattler, 2008).

Once the initial interviews with the child's parents and teachers have been conducted, it is important for the clinician to observe the child in natural settings prior to beginning the administration of the assessment material (Kaufman & Reynolds, 1984). Observations of the referred child in play and classroom settings are an important aspect of creating a complete understanding of the child's performance during the testing session. Classroom or playground behaviors provide important contextual clues concerning child functioning. Similarly, noting the child's behavior in the waiting room may also yield useful information. Most importantly, understanding the child's performance will require "close insightful observation and recording of behavior during the testing period" (Kaufman & Reynolds, 1984, p. 201).

The next step in the test administration process is to establish a working relationship with the child. Establishing rapport with the child will influence a child's testing performance. A child who feels at ease with the examiner will be more relaxed and better able to concentrate on the tasks at hand. The process of establishing rapport with a child often begins with the parents' understanding of the assessment (Sattler, 2008). Parents are frequently the first persons to convey to their children that they will be meeting with a psychologist. For children between the ages of 3 and 6, the concept of a psychologist may be beyond the grasp of their cognitive abilities (Sattler, 2008). Clinicians may want to spend some time prior to the first meeting with the child explaining the assessment process to parents. Meeting with the parents prior to the assessment provides an opportunity to explain the purpose of the assessment, and allows the clinician to suggest how to explain the visit to the child (Sattler, 2008). Psychologists should discourage parents from telling their children that they will be playing games. Oftentimes, the child will enter the session and be disappointed upon learning that not all of the tasks will involve game playing (Sattler, 2008). Besides informing the parent that most children enjoy the

assessment activities, this meeting will give clinicians an opportunity to possibly alleviate parental anxiety concerning the assessment.

When the child enters the assessment room, clinicians should introduce themselves to the parent and then the child using their first name (Sattler, 2008). Sattler indicates that with younger children, psychologists may want to refrain from introducing themselves as a doctor as it may lead to an increased level of anxiety. If the child is very young, the psychologist may want to provide the child with a toy or allow him or her to bring a favorite animal or object into the testing area (Sattler, 2008). For children of all ages, it is important to make the tasks as pleasant as possible and encourage effort without rewarding certain responses. With older children, it is important for the clinician to be honest and adapt their language to an age-appropriate level. Sattler suggests saying something like the following: "Your parents are concerned that you're not doing as well as you're capable of doing, and I'm here to find out how we can help you." (p. 191).

Establishing rapport with children requires the clinician to be patient and maintain a general flexibility throughout the initial meeting and interview. Expressions of warmth and understanding may also enhance the rapport-building experience (Barker, 1990). Children are often anxious or fearful of being away from their parents, so it may be helpful to allow the child's parents to stay in the room until the child feels comfortable in the presence of the assessor (Sattler, 2008). Knowledge of the dynamic aspects of interpersonal relationships and an individual's personality are the basic components for beginning to understand the basic principles that will allow behavior change to occur (Leon, 1989). In the initial meeting with the child, how clinicians introduce themselves, their posture, and other small gestures often set the tone for rapport building (Leon, 1989). Additionally, small gestures such as leaning forward and tiny nods of the head indicate a genuine interest in the client, and will aid in assuaging the patient's initial anxiety (Leon, 1989).

Older children may have developed misconceptions about testing based on information from other children. To eliminate any uncertainty, the clinician can provide an opportunity for the youngsters to share their views as to why they are being tested (Sattler, 2008). Always share with the child the steps that will occur during the evaluation procedures, and if it is feasible indicate that you will be meeting with them at a later date to discuss test results. If the assessment will be conducted at the child's school, building rapport with the child's teacher(s) will be an important step in establishing a working relationship with the child. It is important for psychologists to introduce themselves to teachers several days before the evaluation is to take place (Sattler, 2008). Eliciting cooperation from teachers will provide a more pleasant experience for the child, and rapport will be easier to establish and maintain.

Once a working relationship has been established, the clinician may begin with the actual administration of the assessment materials. As previously noted, it is important for clinicians to administer the tests based on the standardized procedures outlined in the testing manuals. Unfortunately, the most common errors associated with the administration of standardized tests occur in test administration and scoring. McQueen, Meschino, Pike, and Poelstra (1994) stated that improving competency in these areas can be accomplished through both lecture and laboratory interventions designed to improve graduate student testing performance. Interventions that consisted of weekly lecture and laboratory exercises and alerting students to the most common errors associated with a particular instrument prior to the administering of the test reduced the number of errors associated with the administration of standardized tests. Other administration errors were addressed with a variety of interventions including: practicing

determining chronological age, using a ruler when reading test tables, reviewing all derived scores, using electronic calculators, reviewing rules and procedures, having a reviewing study partner, and adhering to standardization procedures.

Sattler (2008) provides an administrative checklist for the WISC-IV and WAIS-III designed for training beginning clinicians. The checklist identifies a number of things that the assessor must do in order to facilitate standardized test administration. Attending to the above-described issues will facilitate an accurate pretest understanding of the child, an awareness of contextual variables of importance, reliable and valid assessment data, as well as promote the child's ability to perform at his or her best during the assessment.

Interpretation of Assessment Material and Results

In the interpretation of test results, multiple sources of data (knowledge of child development, test theory, developmental psychopathology, personality theory, and psychopathology) must be considered (Kaufman & Reynolds, 1984). Integration of assessment data must result in an accurate representation of the child's abilities. Clinicians must never rely solely on test scores when making a diagnostic determination (Sattler, 2008).

Interpretation of assessment data requires an understanding of all the factors that may be influencing the performance of the child (APA, 2000). In addition to simply assessing cognitive abilities, it is imperative to attend to other variables that may potentially influence the learning and testing environments. These variables may include environmental change (e.g., divorce, recent move, etc.), as well as cognitive, emotional, and political factors that may potentially influence the child at home or at school (Boggs et al., 2003). During the assessment, clinicians should keep in mind the child's behavior, attentiveness, reaction to the testing material, posture, gestures, language, and affect. Making note of the nonverbal behavior of the child may play a key role in understanding the results of the various measures (Kaufman & Reynolds, 1984).

Prior to the actual interpretation of the assessment data, the clinician should determine whether the test data are reliable and valid. Outside factors such as loud distracting noises, interruptions, or the temperature in the room may influence the reliability of the child's test performance (Sattler, 2008). Additional factors to consider would be how the child is feeling during the day of the testing. For instance, if the child is not feeling well, or is overly distracted, or is extremely sleepy, test results may not be valid or reliable. A competent clinician should be observant of these issues when interpreting and proceeding through the testing process. A statement about the validity and reliability of the testing results should be included in the beginning portion of the assessment report.

The child's strengths and weaknesses should be determined in relation to the skills of their related age peers. A comparison to the child's peers will allow the clinician to make an informed decision as to whether the child's strengths and weaknesses fall outside the normal developmental ranges (Sattler, 2008). Test interpretation also should involve the examination of any discrepancies observed between background information and the child's test performance (Sattler, 2008).

The Reporting Results

The APA task force emphasizes that clinician competency includes the ability to explain test results and the limitations of the testing to a diverse audience, along with the ability to provide written and verbal communication regarding the results of the assessment. The communication of assessment results begins with the written report. Thorough report writing includes

sections devoted to "interpreting the referral question, test selection, case conceptualization, theoretical orientation, process involved in the interview, interpretation of test scores, integrating various sources of information, prioritizing what is the most important information to include, and the selection of the best means of presenting the information" (Groth-Marnat & Horvath, 2006, p. 73).

The main purpose of the report is to communicate to the readers the results of the assessment in a manner that allows them to understand the main features of the treatment/intervention plan, as well as how the child's strengths will be used to enhance his/her weaknesses. The assessment process is fruitless if the end product cannot be understood (Groth-Marnat & Horvath, 2006). The goals of report writing are to describe the client in a manner that provides readers with a clear picture of the child. Treatment/intervention goals should be presented in a manner that is readily understood and can be easily placed into action. Finally, reports should lead to the suggestion that if they are followed they have a high potential for increasing the quality of the client's life. The need for clarity and concisely written psychological reports is great, and according to Harvey (2006) is one of the most important skills for a competent clinician to possess. Reports often include unnecessary psychological jargon making them hard to comprehend. All psychological reports should be written at a reading level appropriate for the intended audience, client-focused, clear and concise, and recommendations should be easily understood and doable. In this regard, it is important for clinicians to define terms in everyday language (Groth-Marnat, 2003; Harvey, 2006; Sattler, 2008). Report readability can be enhanced by using short sentences minimizing difficult words, reducing the use of jargon and acronyms, omitting passive verbs, increasing the use of subheadings, using everyday descriptions of client behavior, using time-efficient strategies, and collaborating with the client (Harvey, 2006).

In training the beginning student to write a clear and concise report, several suggestions have been made. Example reports should be provided to students as models of appropriate language and reading levels. The reading level of the report should be checked by one of the recommended computer formulas and all reports should be written in a concrete manner that provides examples that are relevant to the client's daily life. It has additionally been suggested that the information provided in the report provide a balance between the strengths and weaknesses of the client (Snyder, Ritschel, Rand, & Berg, 2006).

Typically an assessment report begins with identifying client data. These data include the client's date of birth, chronological age, gender, ethnicity, year of education, date of examination, date of report, and name of the examiner/supervisor. This section is followed by a description of the referral question. Once the referral issue is summarized, a description of the client's background information is provided. In the background section, many reports will include a summary of information gathered from the child's family and teachers. Additional information would include: (1) general information on the child, (2) educational information, (3) family history, (4) medical background, and (5) psychological factors (such as a history of mental illness or previous experience with psychological testing or therapy). A section on behavioral observations typically follows the child's background information. This section provides a description of the client's overall appearance and various behaviors observed throughout the testing sessions such as the child's interest in the testing, level of motivation, and their overall interactions with the examiner. The behavioral observation section typically ends with a statement of the validity of the assessment such as "the examiner believes that these tests should be a valid measure of client x's current level of intellectual functioning based on his/her effort throughout the assessment." The section on test results not only includes a listing of subtest

scores, but also a brief discussion regarding strengths and weaknesses (e.g., verbal IQ subtests reflect strength in verbal comprehension, verbal concept formation, language development, and a capacity for associative thinking). In some settings, it is beneficial to provide a technical protocol page along with the report. Including a technical protocol page allows the clinician to easily provide third parities with the necessary information about the client without having to divulge confidential information in the actual written report.

The final section of the report focuses on recommendations. The recommendation section of an assessment provides possible options for treatment and interventions that would be most beneficial to the child. The suggestions made by the clinician should be specific and provide examples as to how the child can use his or her strongest areas to help build skills (Geffken, Keeley, Kellison, Storch, & Rodrigue, 2006; Sattler, 2008). Recommendations need to specifically address the referral question. According to Turner, DeMers, Fox, and Reed (2001, p. 1106), all psychologists who use "psychological tests in social institutions like schools should be particularly skilled at communicating the results of testing to many different audiences, including educational decision makers, teachers, students, parents, and the public." In an educational environment, the clinician may be asked to determine if the child will require special education services or classroom accommodations (Sattler, 2008). When making the recommendations, clinicians should be sensitive to the ability and motivation of the youngster's teacher.

In addition to the written report, clinicians must be skilled at communicating feedback directly to parents (and or guardians). The feedback session provides the examiner and interested parties with an opportunity to discuss the assessment results. The clinician must present the information to the parents in a manner that facilitates their understanding of the child's strengths, and how these skills will be used to build new skills. The extant literature indicates that providing verbal feedback along with the written report can enhance rapport and allow for all the client's questions to be answered (Allen, Montgomery, Tubman, Frazier, & Escovar, 2003). Clearly, it is helpful to present the results to the parents and teachers in a discussion-based format.

10.2.2 Maintaining the Highest Level of Ethical Standards

10.2.2.1 Ethnic, Cultural, and Linguistic Issues

Knowledge of ethnic, racial, cultural, gender, age, and linguistic variables reflect clinical skills for understanding how contextual variables may impact the entire testing process (APA, 2000). The number of culturally and ethnically diverse individuals living in the USA is increasing. According to the projections made by the US Bureau of the Census, by 2050, approximately 25% of the population will be formed by Hispanic Americans, and approximately 9% of the population will be formed by Asian Americans United States Bureau of the Census (1996, February). It is important for clinicians to be mindful of how cultural variables may influence the assessment process. Cultural characteristics, including the youngster's degree of acculturation, English as a second language abilities, may influence the child's motivation toward and understanding of the assessment process (Sattler, 2008).

APA (2002) suggests that multicultural competency involves recognition of the importance of cultural competence and an awareness of any personal biases the clinician may have that would have an unwanted influence on the assessment outcome. The clinician must also stay

abreast of multicultural affairs and take part in multicultural educational opportunities. When providing services to an individual from a minority group, the clinician must consider the child's/family's ethnic identity, level of acculturation, psychological mindedness, and willingness to access mental health services (Li, Jenkins, & Sundsmo, 2007). Acculturation may be defined as the various stages of change that occur within an individual as he or she adjusts to a new culture (Sattler, 2008). The degree to which individuals accept and adopt the new culture's social norms and rules refers to the degree to which they have acculturated into the society.

Clinicians who provide assessment services to ethnically diverse children must be able to apply their skills and bring their awareness of cultural diversity to the entire assessment process (Ecklund & Johnson, 2007). According to Ecklund and Johnson, the most important skill for clinicians is an ability to establish a working relationship with the child. Second, clinicians must be able to bring sensitivity to any question concerning the child's ethnic background. Third, clinicians must be able to discuss the assessment in a manner that is understood by both the parent and the child. Finally, clinicians must be able to integrate the child's ethnic background into the written report and recommendations. It has been suggested that clinicians address all culturally relevant issues during the interview.

There is limited availability of culturally relevant norms for many of the most commonly employed standardized cognitive tests (Sattler, 2008). Most of the assessment devices were normed using Caucasian samples and relatively few data exist for children of various cultural backgrounds. For this reason, some clinicians suggest that standardized tests should not be used with bilingual populations (Sattler, 2008). They suggest that in the absence of relevant nationwide norms, these instruments hold the potential for harm to culturally diverse populations. Despite these arguments, cognitive assessment is often the primary pathway available for identifying at-risk children and accessing appropriate services. It is suggested that learning about the child's culture enhances the level of understanding and cooperation between the child, the child's family, and the clinician improving the quality of information the assessment provides.

Individuals from minority populations have often experienced segregation, poverty, and discrimination (Sattler, 2008). Being raised in a fiscally impoverished environment is associated with elevated levels of health and stress problems, which are also associated with increased risk for poor social functioning, delayed rate of learning, and decreased level of achievement both in and outside of school (Sattler, 2008). Additionally, beliefs of the family may have a profound impact on the results of the assessment (Sattler, 2008). It should be noted that ethnic and cultural constructs can influence the expression of the individual's intellectual and achievement difficulties, as well as the validity of the assessment instruments for use with an ethnically diverse youngster (Li et al., 2007). To avoid a cultural misunderstanding, it may be helpful for the clinician to seek guidance from a trusted colleague who is knowledgeable in the area of multicultural issues in general, and multicultural assessment in particular. Similarly, the clinician may chose to ask the child's parents about their feelings about seeking help from health professionals (Sattler, 2008). Asking parents questions about their values and beliefs regarding health-related aspects of their cultural values will help facilitate a mutual understanding between the client, the child's parents, and hopefully the child.

An additional concern when assessing culturally diverse children is whether English is their native language. Many children from multicultural families are bilingual raising the question of which language would be best for conducting the assessment (Sattler, 2008). One method for overcoming language and/or value differences is to have a trusted family translator

present when meeting with the parents and child. It may also be helpful to spend sometime directly observing the child in daily interactions with his or her parents, siblings, teachers, and friends. Such observations will offer insight into the child's language of preference and other cultural variables. There are a few measures available for testing language preferences. These tests include the Bilingual Verbal Ability Tests (BVAT; Munoz-Sandoval, Cummins, Alvardo, & Roef, 1998 as cited in Sattler, 2008, p. 157) and the Language Assessment Scales-Oral (LAS-O; Duncan & DeAvila, 1990 as cited in Sattler, 2008, p. 158). Additionally, test translations are available for a few of the standardized measures. However, it is important for clinicians to be aware of the differences in the normative data. A measure must have normative information for the translated version of the test (Sattler, 2008). Based on the guidelines set forth by the APA (2003, p. 389), clinicians are "encouraged not to use instruments that have not been adopted for the target population." It would be unwise for a clinician to translate a test into a different language and use the measures of original normative information to score the protocol.

Clinicians should also be aware of additional language barriers that may impact the outcome of the assessment. For instance, some cultural groups may have words or phrases that are specific to their ethnic background. Clinicians can overcome these language barriers by becoming familiar with the various ethnic groups' particular dialect (Sattler, 2008). Additional factors that may impact the outcome of the assessment are cultural differences in nonverbal behaviors such as eye contact, hand gestures, and sensitivity to spatial distances (Sattler, 2008). In some cultures making direct eye contact for long periods of time is considered to be a sign of disrespect. Similarly, some children may want to sit or stand directly in front of or next to the clinician. Clinicians who make a step backwards may be viewed as rude or as having a lack of cultural understanding. Again, clinicians can avoid these cultural misunderstandings by becoming familiar with each ethnic group's nonverbal behaviors prior to beginning the assessment.

10.2.2.2 Developmental Considerations

Standardized tests employed in cognitive assessments are developmentally normed. However, clinician competency also requires an understanding of the normative developmental process (Boggs et al., 2003). Recognizing that a child's behavior differs significantly from those of peers requires awareness of children's developmental functions and abilities across ages (Mash & Wolfe, 2005). Knowing what milestones are accomplished by most children of a given age, a clinician might more easily recognize deviations from typical variation in childhood growth and development (Boggs et al., 2003). That is, clinicians must recognize the relationship between the areas of concern (i.e., in the referral question) and normal developmental pathways. Using the child's peers as a normative reference provides a "convenient summary of a child's developmental standing in several areas" (Edelbrock, 1984, p. 22).

Sattler (2008) provides examples of common trends in cognitive development, language acquisition, self-concept, person perception, moral judgment, temporal concepts, and recognition of emotion. Knowledge of these developmental trends is important as the assessment, assessment materials, and initial interview are all tailored to meet the developmental level of the various age groups. Boggs et al. (2003) suggest that clinicians can become familiar with activities associated with each developmental level by observing the child in the classroom and

in other daily activities. The observations of daily functioning are suggested to provide a framework from which observations within the assessment setting can be integrated into completing an accurate description of the child. Thus, the child's developmental level can provide a prognostic framework that has implications for a diagnosis as well as treatment considerations (Allen & Gross, 1994).

10.2.3 Testing Individuals with Disabilities

Knowledge of testing individuals with disabilities is the third core knowledge area necessary for clinician competency. Competency requires the ability to administer tests to children with a wide array of physical and mental abilities. That is, clinicians must be skilled in the area of making appropriate accommodations during testing of children with disabilities. Much of the above discussion concerning test selection and test administration procedures applies to working with individuals with identified disabilities.

The first step in providing assistance to a child with a disability is to determine if testing accommodations are appropriate. Clinicians must pay attention to the testing environment as well as other environmental characteristics that may influence the outcome of the testing session. At times, obtaining accurate assessment data may require adapting the method by which the youngster responds to test items, changing the manner in which the material is presented to the child, changing the actual testing environment, adapting the time of the test, or substituting or selecting out portions of the testing material (American Educational Research Association, APA, & National Council on Measurement in Education, 1999). Test substitution or using only selected portions of the testing material is a common practice when testing children with physical or sensory deficits (American Educational Research Association, APA, & National Council on Measurement in Education, 1999). For example, if a portion of the test requires an oral presentation of material, the oral section of the test may be eliminated. In instances were a child has a severe disability, it may be necessary for the child's aid to be in the testing room. Clinicians should indicate to the aid that the testing materials require the use of standardized procedures in which helping and questioning would not be appropriate (Sattler, 2008).

It should also be noted that not every child with the same disability will require the same accommodation. In some instances, simple changes such as providing access to a wheel chair, enhanced lighting, and allowing for extended breaks may be appropriate testing accommodations (American Educational Research Association, APA, & National Council on Measurement in Education, 1999). Clinicians must use their judgment to consider what accommodations would best fit the current child's needs (American Educational Research Association, APA, & National Council on Measurement in Education, 1999). For example, if a child has a visual impairment presenting the testing materials in Braille may be suitable. However, if the child has a physical disability in addition to the visual impairment, it may be more appropriate to present the testing material through some type of audio device.

A main issue for clinicians when assessing children with auditory deficits is to differentiate between deficits associated with intellect versus deficits associated with lack of experiential abilities (Braden, 2005). As a result of being raised in an environment in which spoken language is the norm, children who are hard of hearing or deaf may experience developmental delays (Braden, 2005). Additionally, children with auditory deficits are often provided limited

access to culture and language creating additional delays in obtaining basic developmental milestones (Braden, 2005). When testing children with auditory impairments clinicians must determine the child's primary language and provide this language throughout the testing session (e.g., sign language, access to a trusted sign language interpreter, etc.). The child may be assisted through the use of written test instructions. If a child displays severe disabilities, such as profound blindness or illnesses like cerebral palsy, collaboration with the child's teachers or aids may provide excellent information for choosing an appropriate test for the child. Finally, it may be helpful to ask the child's teacher, parents, or aids when the best time of the day for testing would be (Sattler, 2008).

According to the American Educational Research Association, APA, & National Council on Measurement in Education (1999), when deviations from the standardized testing procedures have occurred, clinicians should make note of the modifications in the assessment report. In the report, a statement as to the reliability and validity of the testing scores should be made. In some instances, a special notation such as an asterisk must be placed next to any scores in which alternate forms of the testing procedure were used. Clinicians should also provide readers with a rationale for why modified testing procedures were chosen, and documentation outlining the testing procedures followed. It should also be noted that the APA recommends that when necessary clinicians should seek legal advice prior to making alterations, and when possible clinicians should pilot test administration and scoring alterations before administering the materials to an actual client.

In addition to documenting procedural differences, clinicians should also pay particular attention when interpreting test results. Competent clinicians who provide testing to children with disabilities must be familiar with norms for regular and special populations (APA, 2000). In some instances, the use of regular norms is "appropriate when the purpose involves the test taker's functioning relative to the general population" (American Educational Research Association, APA, & National Council on Measurement in Education, 1999, p. 107). However, even when normative data are not available for deviations in standardized procedures, valuable information can still be obtained and reported. As an example, seeing a child correctly complete a difficult task on a subtest in which additional time was allotted would provide the examiner with clinically relevant information on the child's abilities to see a task through to completion. It is also important to remember that clinicians, regardless as to the population being tested, should always interpret test scores in context with information obtained from other forms of assessment (e.g., parent or teacher interviews, behavioral observations).

10.3 Expert Competencies

In addition to acquiring competency in the four core areas of knowledge and skill, clinicians who chose to specialize in testing children need to demonstrate an ability to assess youngsters with a wide variety of needs. At the expert level, clinicians must demonstrate an ability to administer specialized test batteries necessary for making differential diagnoses as well as important academic decisions. As noted in the previous section, clinicians who display expert competency must be able to select the most appropriate test batteries based on the referral question and the abilities of the child being evaluated. Thus, clinicians who specialize in the assessment of children need additional expertise in context-relevant areas.

10.3.1 Tests for Children Who Present with Learning Disabilities

When children are referred for a LD evaluation the goal is to determine why the child is struggling academically. LDs are determined by examining an individual's achievement test (e.g., WIAT-II) and IQ scores (WISC-IV). The IQ discrepancy model is the most popular model used for identifying a LD. A LD is diagnosed when a child's achievement test scores are substantially below his or her intellectual abilities. It requires that the child's achievement score be at least 2 SD below that of the IQ score (Dombrowski, Kamphaus, & Reynolds, 2004; Proctor & Prevatt, 2003). That is, a LD is diagnosed when a child's achievement test scores are substantially below his or her intellectual abilities.

10.3.2 Tests for Children Who Present with Reading Difficulties

LD assessment and general psychoeducational assessments share much in common. General tests of intelligence and achievement are employed in both types of assessments. A major difference between these assessments generally involves use of the additional specialized measures in the LD assessment. Clinician competency not only involves the selection of relevant measures, but also the ability to interpret and integrate LD instrument test results against the backdrop of more general measures on intellectual and academic functioning. For example, in the case of the child suspected of suffering from dyslexia, the first step in the diagnostic procedure would be to rule out other sources of difficulty that may result in the child's low reading achievement while taking into consideration the child's developmental, medical, educational, and family history (Berninger & O'Donnell, 2005). The assessment battery might include a test such as the WISC-IV Verbal Comprehension Index to assess the range of the child's verbal reasoning ability. Additional measures of accuracy and rate of "oral real world reading, phonological decoding, and morphological decoding, text reading, and measures of accuracy and written spelling would likely also be administered to evaluate whether reading and spelling skills are low" (Berninger & O'Donnell, 2005, p. 208). Next, an achievement measure such as the WIAT II or WJ III would be selected. The clinician would then determine whether the inclusionary criteria for dyslexia are present. The competent clinician would also determine if the child has additional problems with arithmetic, attention-deficit disorder or other disorders due to chronic academic difficulties (Berninger & O'Donnell, 2005). If any of additional problems were present at the time of testing, the clinician must address these issues in the recommendations and intervention sections of the assessment report.

10.3.3 Assessment of Children Who Present with Attention Difficulties

ADHD assessments are a common referral question. Although not created to specifically address problems associated with ADHD, intelligence tests such as the WISC-IV play a crucial role in making a differential diagnosis (Schwean & Saklofske, 2005). To make a differential diagnosis of ADHD, the four most important scales in the WISC-IV are "the Verbal Comprehension (VC) index, the Perceptual Reasoning (PR) index, the Working Memory (WM) index, and the Processing Speed (PS) index" (Schwean & Saklofske, 2005, p. 244). These are important because according to theories of ADHD, children who present with symptoms

consistent with ADHD generally have difficulties with comprehension, organization, concentration, and tasks that measure selective attention (Schwean & Saklofske, 2005). In the above-mentioned sections of the WISC-IV, the VC index provides a marker of the child's verbal comprehension, verbal abilities, ability to think with words, as well as an ability to apply verbal skills and information to find solutions to novel situations. The PR index provides an indication of a child's perceptual reasoning and organizational abilities. The WM index yields information on attention, concentration, and working memory (Schwean & Saklofske, 2005), while the PS index reflects mental processing speed. Additionally, knowledge and awareness of the child's overall cognitive functioning is important for planning the behavioral and educational programming.

A differential diagnosis of ADHD requires parceling out other developmental conditions such as other forms of LDs, or several of the internalizing (anxiety and depressive disorders) and externalizing disorders diagnosed in childhood (such as conduct disorder or oppositional defiant disorder). Most ADHD assessment batteries include an IQ test (such as the WISC-IV), an achievement test (such as the WIAT-II), interviews with both the parent and child, the CPT-II, the Barkley ADHD (parent and teacher forms) or the Conner's ADHD scales, and some measure of personality (e.g., The Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A) or BASC-2). If the child is in high school, the LASSI-HS would be administered to determine problems related to study skill and school issues. Furthermore, if reading problems are evident, a supplementary administration of a test such as the Nelson Denny may help to specify the exact nature of the problem.

10.3.4 Testing Gifted Children

Children who fall within the gifted category are generally assessed through IQ testing. According to Sparrow, Pfeiffer, and Newman (2005), in USA, the Wechsler scales are the most widely used instruments for assessing gifted abilities. School districts typically view gifted as being defined by IQ score, academic performance, or both. As with other forms of assessment, it is recommended that multiple assessment measures be used when identifying children who fall within the gifted category. Along with an intelligence test, such as the WISC-IV or WPSSI-III, a test such as the Gifted Rating Scales (GRS) should be administered, along with an achievement test such as the WIAT (Sparrow, Pfeiffer, & Newman, 2005). These instruments provide an additional indication of the child's achievement and motivation in school. In particular, the GRS scale includes a teacher form (GRS-S), which allows for additional information on the child's in-class performance to be obtained.

10.3.5 Tests for Children Who Present with Language Disabilities

When testing children who are presenting with a language disability, use of a multifaceted assessment approach is important (Sattler, 2008). A multifaceted approach would include ruling out any underlying medical conditions that may be contributing to the language impairment, by obtaining behavioral reports from teachers and parents, direct observation of the child, the administration of an IQ test, and some type of language test. Frequently, instruments such as the WISC-IV or WJ-COG to evaluate IQ and the Clinical Evaluation of Language

Fundamentals (CELF) to evaluate language are employed (Wiig, 2005). In particular, subscales on the WISC-IV that tap into Verbal Comprehension and Working Memory index are most relevant for evaluating language impairments (Wiig, 2005). The Verbal Comprehension index taps into the child's verbal abilities, ability to think with words, as well as an ability to apply verbal skills and information to find solutions to novel situations. Scores obtained on these subtests can provide a marker for identifying the child's verbal strengths and weaknesses (Wiig, 2005). As an example, the similarities subtest taps into the child's ability to form verbal concepts, abstract and concrete reasoning ability, and ability to separate essential from nonessential details. Often, children with language disabilities such as Expressive or Mixed Receptive disorders will provide random responses that are impulsive in nature. Such "responses may indicate a focus on differences in meaning rather than on similarities" (Wiig, 2005, p. 338). The Working Memory index taps into the child's ability to sustain attention, short-term memory, and numerical/encoding abilities and provides additional support for language difficulties. Children who struggle with the subtests that form the Working Memory index often have difficulties with letters and other tasks that require sustained attention, encoding, and shifting focus on various types of symbolic information.

Clinicians who administer assessments to children with language abilities must make certain that the tasks required for each subtest are understood. To determine if comprehension has occurred, it may be helpful for the clinician to question the child about task expectations (Wiig, 2005).

Clinicians should also record all responses made by the child during the assessment. Impulsive responses provide useful tools for diagnosing a language disorder. In particular, responses that include the use of "similar sounding words (e.g., television for telephone)" are indicative of a child with language difficulties (Wiig, 2005, p. 340). It has also been suggested that if cognitive deficits that are found to be linked to language and communication disabilities are observed, the clinician should interpret the results with a speech pathologist (Wiig, 2005).

10.3.6 Additional Ethical Considerations

Since children are most frequently referred for cognitive assessment in order to identify developmental and/or learning delays, the assessment process may result in labeling or diagnostic classification. There are a number of consequences associated with diagnostic labels. Benefits may include legal protection, increased awareness of the disorder, access to relevant services, development of school-based intervention programs, and increased research on the etiology of the problem (Sattler, 2008). However, many argue that there are a number of undesirable consequences associated with the use of diagnostic labels with children. The most prominent concern associated with labeling/classification is the concept of self-fulfilling prophecy. Individuals who believe that labels lead to a self-fulfilling prophecy claim that categorization leads to a decreased level of performance expectations in both children who carry the label, as well as from those working with the youngsters (e.g., parents, teachers, friends; Sattler, 2008).

Although it is not always possible to avoid use of the diagnostic labels, this issue may be mitigated by focusing on descriptions of the child's behavior (e.g., reporting descriptions of the child's behavior or skills instead of diagnostic labels) when presenting and interpreting assessment data. By describing the behaviors instead of labeling the child based on cutoff scores, the clinician will assist in creating a well-rounded understanding of the child. It will also enhance

the reader's understanding of how the recommendations in the report can be facilitated. Thus, competent clinicians must be aware of the problems associated with the use of classification and labeling systems, and not allow them to unfairly influence consumers of their evaluations of the child's abilities.

10.3.7 Trajectory for Obtaining Competency

APA accreditation guidelines for doctoral programs in clinical psychology require a curriculum plan that exposes students to the breath of scientific psychology, its history, and research methods. Training must include coursework covering the scientific, methodological, and theoretical foundations of practice and issues of cultural and individual diversity. Students also receive exposure to coursework related to diagnosing and defining problems through measurement and assessment, as well as courses focusing on treatment formulation. Lastly, students are expected to receive supervised practicum experiences (APA, 2007). While it is clear that the conceptual and applied fundamentals of assessment are being provided during pre-doctoral training, it may be that clinical assessment competency requires an increased training focus. Survey data indicate that internship directors are frequently disappointed with the assessment skills displayed by interns (Clay, 2006).

Internship directors would like their psychological interns to be competent with the most commonly used intellectual tests (Krishnamurthy et al., 2004). However, Clemence and Handler (2001) found that over half of the internship sites that they surveyed reported that it was necessary to reteach interns basic introductory-level assessment skills. While some skills are retaught at the internship, the opportunities for assessment during the internship year may not be enough to facilitate the development of assessment competency. In order to improve assessment skill training, it may be necessary to incorporate additional assessment-related coursework into the curriculum, along with providing cross-training experiences during all semesters of both departmental clinic and external clinic practicum training.

In addition to general training in cognitive assessment, students interested in the assessment of children must also receive additional specialized training in order to become competent clinicians. For example, clinicians who test children within the context of an educational setting must have the "skills and knowledge to evaluate the relative contribution of teacher competence and motivation, school and classroom climate, peer group influence, class size, and other factors that play a critical role in determining a student's future performance" (Turner et al., 2001, p. 106). Success in this setting also requires training that will facilitate familiarity with the general requirements (e.g., eligibility rulings) schools utilize when making decisions concerning placing children into specialized programs (Turner et al., 2001). Clinicians can accomplish this requirement by keeping current with the research literature in the area of psychoeducational assessment, and remaining up to date on changes regarding special education services through the IDEA.

Roberts et al. (1998) suggested that graduate training should offer students an opportunity to work with an array of children of both gender and from various ethnicities. These experiences should also include the training and use of numerous assessment instruments. Practicum experiences should consist of exposure to settings including inpatient and outpatient facilities, schools, facilities that serve children with disabilities, and private practices. Additional courses in mental retardation/developmental disabilities, assessment techniques

specialized for children, and specific legal and ethical issues associated with working with children, adolescents, and their families should be accessible to students throughout their training (Roberts, Erickson, & Tuma, 1985).

Psychologists who work with children from diverse populations need to have a knowledge base of cultural variations in beliefs as well as an understanding of assessment tools that have been shown to be reliable and valid for certain groups (APA, 2003). In order to obtain these skills, clinicians must be provided with training in multicultural approaches as well as cultural-centered training. The APA recommends that an emphasis on multicultural diversity begins at the graduate training level. Finally, in recent years, many of the most frequently used assessment tools have been adapted for computer administration. Computer-adapted testing tools allow for consistency in administration, scoring assessment protocols, and generating assessment reports. Clinicians must be familiar with the computerized testing material (Sattler, 2008).

10.3.7.1 Additional Training

Clinicians who wish to enhance their competency should select a postdoctoral position that allows them to complete specialized training. According to the APA's (2001) accreditation guidelines, postdoctoral sites for specializing in work with children should provide training and educational experiences that will allow the clinician to provide services at an advanced level of proficiency. The educational experiences at the postdoctoral level should require a residency of at least 1 year as well as provide exposure to psychological services for infants, children, and adolescents in various settings. Specialized training at the postdoctoral level will allow the clinician to gain a depth of information crucial for gaining expert competency.

Clinician competency in assessment is reflected in the clinician's ability to display sensitivity to a variety of factors that extend beyond the basic administration and interpretation of the assessment results. This knowledge and skill allow for a complete picture of a child to result from the assessment process. Cognitive assessment with children is best viewed as an ongoing dynamic process for evaluating the child's abilities. The process does not end with the assignment of a diagnostic label. Assessment serves as a starting point for gathering meaningful information that will aid in the development of an effective treatment plan for the child, which will ultimately aid in the improvement in the quality of the child's life.

10.4   Summary

The aim of this chapter was to provide a comprehensive overview of the child's cognitive assessment process. Following a brief overview of the area, basic clinician competencies were discussed. In this section, the four core areas of clinician competency outlined by the APA task force were delineated. These areas include having a basic understanding of psychometric theory; knowledge of ethnic, racial, cultural, gender, age, and linguistic variables; knowledge of how to test individuals with disabilities; and supervised experience. Following this brief discussion, an example of a basic psychoeducational test battery was explored. Next, guidelines for test administration, test selection, and test interpretations were presented. In these subsections, suggestions were provided for enhancing rapport with the child and increasing the readability

of the written report. An overview of a typical assessment report was also provided. This example offered a broad picture of the assessment process, beginning with identifying the referral question, the child's background (general, educational, family history, medical background, and psychological factors), behavioral observations, and presenting the test results. Subsequently, a discussion on clinician competency in ethnic and cultural issues, gender and age, and linguistic variables was presented. In the third section, factors associated with expert competency were discussed. In this section, test batteries for several of the most common assessments were explored with an emphasis on clinician competency. The section on expert competency ended with a trajectory for obtaining the necessary skills to proficiently work with children. Issues associated with graduate and post-doctoral-level training were also discussed. Finally, suggestions concerning how best to provide the training clinicians need to achieve competency were explored.

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11 Behavioral Assessment with Adults

William H. O'Brien · Carmen K. Oemig · Jebediah J. Northern

Abstract: Behavioral assessment is an approach to the measurement and understanding of human behavior that requires several conceptual and clinical competencies. Basic conceptual competencies in behavioral assessment include a well-developed knowledge of empiricism, learning theories, idiographic measurement strategies, behavioral change processes, and multivariate causality. Behavioral assessment also requires familiarity with psychometric principles such as norms, reliability, and validity. Basic clinical competencies in behavioral assessment are two-fold. One set of basic clinical competencies subsumes information gathering methods such as interviewing, behavioral observation, self-monitoring, and self-report inventory use. The other centers on the generation of topographical and functional analyses of behavior that can be used to guide treatment design. In addition, the evolution and expansion of the behavioral tradition has created a need for expert-level conceptual and clinical competencies in behavioral assessment. Expert conceptual competencies in behavioral assessment center on familiarity with recent "third wave" advances in the philosophical, theoretical, and empirical foundations of behavioral assessment and behavior therapy. Expert clinical competencies require familiarity with decision-making processes, the fallibilities of clinical judgment, and the quantitative strategies that can be used to aid clinical decision-making and case formulation in behavioral assessment.

11.1 Overview

Behavioral assessment is a well-developed and critically important area of research and practice designed to yield comprehensive evaluations of the form and function of target behaviors (i.e., target behaviors are cognitive, emotional, physiological, and motor responses that are the focus of assessment; target behaviors can be either adaptive or maladaptive) for an individual clients or groups. As a theoretical approach, behavioral assessment requires familiarity with cognitive-behavioral theories and psychometrics. As a clinical approach, behavioral assessment requires familiarity with specific skills designed to acquire and evaluate behavioral data. Thus, behavioral assessment can be divided into conceptual and clinical competencies. Additionally, these competencies can be further divided into basic and advanced levels. In this chapter, we will present a general overview of behavioral assessment and its status as an approach to assessment. We will then present the basic conceptual and clinical competencies associated with behavioral assessment. Following this, the advanced competencies will be described. Finally, areas of future research and development of behavioral assessment will be presented.

11.2 Overview of Behavioral Assessment with Adults

The core characteristics of behavioral assessment are made clearer when they are contrasted against psychodynamic and personality-oriented approaches to assessment. These assessment approaches take the position that target behaviors can be best understood as being *caused* by stable, internal, and dysfunctional psychological processes. Further, in many cases, it is presumed that these dysfunctional psychological processes are largely unconscious or outside of the client's awareness. Some commonly encountered examples of dysfunctional internal psychological processes include: defense mechanisms, impaired object relations, and personality characteristics (cf. Bond, 2004; Laplanche & Pontalis, 1973).

As dysfunctional internal psychological processes are thought to be the primary cause of target behaviors, psychodynamic and personality-oriented assessment procedures emphasize measurement of unobservable or inferred constructs. Additionally, situational factors that may be exerting an important influence on target behaviors are de-emphasized. The Rorschach provides an excellent example of this inferential and nonsituational measurement approach. In a typical Rorschach assessment, the client is presented with the classic ambiguous inkblots and asked to provide a verbal account of what he or she sees. The examiner will prompt for clarification of vague responses but is also cautioned to be as neutral as possible. The client's verbal responses are recorded verbatim. These verbatim accounts are then often coded along a number of dimensions (e.g., perception of certain images; verbalizing the use of form, color, shading, white space; verbalizing perception of the movement; etc.) using a manual developed by Exner (1986, 1991). The coded responses are then summed and aggregated in many ways to derive various indices of the client's internal dynamics.

An assumption underlying the use of the Rorschach is that the manner in which the client structures his or her perceptions of the inkblots reveals critical information about personality, psychological processes, and unconscious conflicts. For example, the color-affect hypothesis, which is derived from psychodynamic theory about emotional regulation, posits that cards containing inkblots with color (e.g., red, blue, green) elicit emotional activation (Exner, 1991). If a client reports that color is used in forming his or her perception of a number of inkblot responses (e.g., "it looks like an undersea landscape with different colors of coral"), it is thought that the client has impaired self-regulation because he or she is not able to suppress the emotional reaction elicited by the colors in the inkblot. This poor self-regulation would be taken as an index of an affective disorder or psychosis. Alternatively, if the client does not report the use of color in many responses, then he or she is thought to have excessive self-regulation consistent with repression.

As is evident in the Rorschach example, the test is designed to identify stable internal psychological processes using verbal responses to test stimuli. The scoring and interpretation system also makes no allowance for interpreting client responses in relation to ongoing and/or recent situational events that may exert significant impact on verbal responding such as recent life stressors. These two characteristics of the Rorschach have been extensively researched in the past decade. Although there is continuing debate about the utility of the Rorschach, it appears to be clear that the test can be scored reliably, but that the validity of most summary scores is poor or undermined (Acklin, McDowell, Verschell, & Chan, 2000; Lilienfeld, Wood, & Garb, 2000). Further, key psychodynamic assumptions (e.g., the color-affect hypothesis) have not been supported (Frank, 1993). Finally, there is ample evidence indicating that life stressors and ongoing contextual factors exert a significant influence on Rorschach responding

(Exner & Sendin, 1997). Taken together, these flaws in the Rorschach system have resulted in a number of researchers recommending a moratorium on its use (e.g., Garb, 1999).

Personality assessment is similar to psychodynamic approaches because it is thought that responses to paper-and-pencil questions represent highly inferential and stable internal psychological processes. Additionally, like psychodynamic approaches, the measurement of contextual factors is de-emphasized. The Minnesota Multiphasic Personality Inventory (MMPI), a commonly used personality measure, illustrates these two characteristics. Items on the MMPI are carefully worded to avoid linking the item to a specific situation or time frame. For example, a client can only respond "yes" or "no" to broadly worded items such as "I feel uncomfortable in public." Thus, there is no possibility of measuring how discomfort in public situations varies across situations (e.g., giving a public presentation, sitting in a classroom, being at a social event, taking public transportation) and time. Additionally, an "yes" response will be interpreted as an indicator of an internal psychological process such as introversion.

Behavioral assessment approaches find fault with psychodynamic and personality-oriented approaches in two important ways. First, because unobservable internal constructs are presumed to be the primary cause of target behavior, circular reasoning is frequently encountered in psychodynamic and personality approaches to assessment. As noted by O'Brien and Haynes (1995), circular reasoning is evident in Fenichel's (1945) description of the reaction formation, which is described as a defense mechanism that occurs when unconscious sexual or aggressive impulses are reorganized by ego into behaviors that appear to have the opposite intent. For example, Fenichel describes that a reaction formation would be evident when "a hysterical mother who unconsciously hates her child may develop an apparently extreme affection for the child" (p. 151). The circular reasoning in this example is clear. The observable action, extreme affection, is interpreted to be an index of inferred unconscious hatred. However, the only evidence used to support the presence of unconscious hatred is affectionate behavior itself. This problem of tautology in psychodynamic and personality approaches to assessment remains a pervasive and pernicious problem for researchers and clinicians alike.

Another example of circular reasoning evident in psychodynamic and personality approaches is oftentimes evident in behavioral consultations which we encounter in medical settings. A common referral concern is that a patient may be using his or her call light excessively and/or calling out for help from nursing staff. Upon arrival to the room, the nursing staff may find that the client is experiencing what is determined to be a minor concern such as need to have his or her bed adjusted or requesting the use of restroom. The nursing staff will then typically apply a personality approach to the problem suggesting that the patient is "attention seeking," "manipulative," or "a whiner." Note that the locus of cause in these accounts lies within the patient rather than the environment. Further, note that the internal causal factor is thought to be a dysfunctional psychological characteristic. This is an example of circular reasoning. The calling-out behavior is presumed to be caused by an internal state (e.g., attention seeking). However, the presence of the internal state is based on the calling-out behavior itself.

Interestingly, the patient will also typically apply personality-based and circular reasoning to the behavior of the nursing staff. So, when asked why he or she is calling out, the patient will often respond that the nursing staff are "uncaring," "ignoring me," or "too busy for me." Again, the locus of cause in these accounts resides within the nursing staff rather than the environment, the internal causal factor is thought to be a dysfunctional psychological characteristic, and the reasoning is circular.

One can uncover circular reasoning by asking three questions: (a) what is the problem behavior, (b) what is the presumed cause, and (c) what evidence is there to support the presence of the cause and its effect on the problem behavior? If the answer to (c) is the same as the answer to (a), then the explanation is circular. Applied to the aforementioned example, we can clarify the problem in logic. Question: what is the target behavior? Answer: calling out for help for minor concerns. Question: what is the cause? Answer: the patient is manipulative. Question: how do you know the patient is manipulative? Answer: the patient calls out for help for minor concerns.

A behavioral assessment approach to this type of referral problem would explore the problem from a very different and noncircular stance. Rather than search exclusively for internal causes of the target behavior such as assessing "manipulativeness," the behavior therapist would explore situational factors such as the functional relationship between the nursing staff behavior and patient behavior. When this approach is taken, the cause of the calling-out behavior becomes evident – calling-out behavior is shaped and maintained by negative reinforcement (i.e., visiting with the patient reduces distress and/or physical discomfort) which is provided by the nursing staff. The process unfolds as follows. Initially, the nursing staff members provide consistent responding to the call light. However, after it is determined that the patient is "manipulative," the nursing staff will begin to withhold or delay responding to the call light. This is essentially withdrawing negative reinforcement for call-light use. The patient then experiences increased distress about being isolated from medical care while he or she is in discomfort and unable to obtain relief independently. Given intensified distress and withdrawal of reinforcement for call-light use, the client will escalate help-seeking behavior by calling out. This is analogous to an extinction burst which occurs for a period of time after reinforcement for a behavior is removed. The nursing staff members respond to the calling out and, thereby, provide negative reinforcement for this new help-seeking behavior. The patient is now more likely to call out for help in the future. Further, as the nursing staff members continue to withhold reinforcement until calling-out behavior occurs, the patient will continue to use it as a means for obtaining help.

It is important to note that this behavioral formulation of calling-out behavior is not based on an unobservable internal psychological characteristic. Instead, the cause of the calling out is based on the nature of observable and measurable interactions between the patient and the nursing staff. Further, the behavioral formulation is noncircular because the causal variable (nursing staff reinforcement) is different from the target behavior (calling out). We can return to the three questions presented earlier to confirm that it is noncircular. Question: what is the target behavior? Answer: calling out for help for minor concerns. Question: what is the cause? Answer: nursing staff members are providing negative reinforcement for calling-out behavior by withholding responding until the client begins yelling. Question: how do you know that the nursing staff members are withholding reinforcement until the client begins yelling? Answer: it has been reported by the client, confirmed by the nurses, and observed by the consultant.

It is also important to note that behavioral formulations such as these readily lead to the development of an intervention – having nursing staff provide consistent reinforcement for call light use and *not* calling out (e.g., nursing staff visit patient when he or she is quiet to check on a consistent basis). This is known as differential reinforcement for incompatible behavior and has been shown to be an effective intervention for a wide variety of problem behaviors.

The second major criticism leveled at psychodynamic and personality assessment approaches to assessment has been the lack of research support for the main assumptions that:

(a) internal psychological characteristics account for meaningful amounts of variance in target behavior occurrence and (b) assessment of these factors leads to effective interventions. This lack of research support is, at least partially, a function of the use of poorly defined internal psychological characteristics in many investigations. Additionally, interventions targeting modification of myriad internal psychological characteristics such as cognitive structures, personality, traits, and the like have yielded inconsistent outcomes relative to behavioral interventions (Hayes, 2004).

In contrast to psychodynamic and personality approaches described above, behavioral assessment emphasizes the evaluation of *behavior in context*. Thus, the onset, maintenance, and termination of any behavior are thought to arise out of an interaction between individual characteristics (his or her learning history and biological characteristics) and the environment (which includes relationships with people or animals as well as the inanimate characteristics of the environment). Focusing on a single component of this complex interaction (i.e., internal personality characteristics) is thought to be excessively simplistic and likely to yield an inadequate account of how and why behavior occurs.

11.3   Current Status and Applications of Behavioral Assessment

One indicator of the utility of an assessment method is the extent to which it is used in research and practice. Previously, we evaluated the behavioral assessment practices among scientist-practitioners who endorsed a cognitive-behavioral perspective in a national survey (O'Brien, McGrath, & Haynes, 2003). The results of the survey indicated that behavioral assessment was reported to be very important in treatment formulation. The more commonly reported assessment methods used by survey respondents are summarized in ▶ Table 11.1. These data can be compared to those obtained by Elliot, Miltenberger, Kaster-Bundgaard, and

■ Table 11.1

Results of surveys investigating assessment methods used by members of the association for the advancement of behavior therapy

Assessment method	Percent of clients assessed with this method	
	O'Brien et al., 2003	**Elliot et al., 1996**
Interview with client	92	93–94
Direct behavioral observation	55	52
Behavior rating scales and questionnaires	49	44–67
Self-monitoring	44	44–48
Interview with significant others	42	42–46
Interview other professionals	37	38–42
Mental status exam	32	27–36
Structured diagnostic interview	31	23–29
Personality inventory	16	15–20
Role play	15	19–25
Intellectual assessment	11	16–20
Analog functional analysis	10	10–16
Projective testing	3	3–5

• **Table 11.2**

Assessment methods reported in the *Journal of Consulting and Clinical Psychology*

Publication year	Treatment outcome studies (N)	Self-report questionnaire (%)	Behavioral observation (%)	Self-monitoring (%)	Psychophysiological assessment (%)	Projective testing (%)
1968	9	33	56	33	0	0
1972	23	48	35	22	0	0
1976	34	50	44	9	18	4
1980	21	62	33	29	14	9
1984	37	51	16	32	16	0
1988	21	81	24	38	10	0
1992	21	81	33	14	9	0
1996	28	86	7	25	25	0
2000	42	98	17	17	33	0
2004	55	100	13	27	20	0
2007	53	100	4	2	9	0

Lumley (1996) who also conducted a survey of academic psychologists and practitioners. Like Elliot et al. (1996), we observed that behavioral interviewing (with the client, a significant other, or another professional) is the most commonly used assessment method. The administration of self-report inventories is the next most commonly used assessment method followed by behavioral observation and self-monitoring.

In addition to the methods reported by behavior therapists, another indicator of the applicability of behavioral assessment is in clinical research. Haynes and O'Brien (2000) evaluated data on the types of assessment methods used in treatment outcome studies published in the *Journal of Clinical and Consulting Psychology* (JCCP) from 1968 through 1996. *JCCP* was selected because it is a high-quality, nonspecialty journal that publishes important clinical research. Articles published in 2000, 2002, 2004, and 2007 were added to these data and the results are summarized in ❯ Table 11.2.

❯ Table 11.2 illustrates several important points about assessment. First, self-report questionnaire administration has become the most commonly used assessment method. Additionally, most of these questionnaires used in these treatment outcome studies assessed specific target behaviors (e.g., depressed mood, anxiety) rather than psychodynamic characteristics or personality constructs. Thus, their use tends to be consistent with a behavioral assessment approach which focuses on specific and observable behaviors. Second, core behavioral assessment methods such as behavioral observation and self-monitoring are frequently used in outcome studies. Finally, projective testing, which is a mainstay of psychodynamic approaches, has become virtually nonexistent in the treatment outcome literature.

In summary, behavioral assessment is an approach that differs from traditional psychodynamic and personality assessment approaches because it emphasizes an understanding of behavior in context. It has become an important assessment approach in clinical practice and research. The increased use of behavioral assessment reflects the utility of this approach for measuring how and why behavior occurs for an individual client. In the following section, we will introduce the basic conceptual and clinical competencies of behavioral assessment.

11.4 Basic Competencies

11.4.1 Conceptual Competencies 1: Basic Assumptions of Behavioral Assessment

Understanding the essential philosophical and theoretical characteristics of behavioral assessment is critical for understanding it as an approach to the measurement and evaluation of behavior. The most important characteristic is functionalism (Hayes, 2004; Haynes & O'Brien, 2000). Functionalism is a philosophical and theoretical approach to behavior which posits that target behaviors occur as a function of complex causal influences that can be partitioned into intrapersonal events (e.g., physiological states, cognitive experiences, learning history, etc.), social environmental events (e.g., interpersonal interactions), and nonsocial environmental events (e.g., settings, time of day, etc.).

From a functional perspective, the essential unit of analysis in behavioral assessment is the *relationship* between target behaviors and the contexts within which they occur (Fletcher & Hayes, 2005). Thus, target behaviors cannot be isolated from the environment and evaluated for form and content. Instead, the focus is on how and why target behaviors occur within specific and well-defined intrapersonal, social environmental, and nonsocial environmental settings.

Empiricism is another key characteristic of behavioral assessment. The endorsement of empiricism provides support for the use of well-developed and minimally inferential operational definitions of target behaviors and contextual variables in any assessment. Further, there is a preference for the use of operational definitions and measures that permit quantification of target behaviors, contextual variables, and the relationships among them. Finally, the empirical assumption supports the use of quantitative methods to evaluate treatment process and outcomes (O'Brien, Kaplar, & McGrath, 2004; Watson & Gross, 1999).

A third characteristic of behavioral approaches is the reliance on learning theories to explain how and why target behaviors are acquired, maintained, and changed. The crucial learning theories required for a basic understanding of behavioral assessment are respondent conditioning, operant conditioning, and social learning theory. It is also becoming apparent that functional contextualism, an extension of functionalism, is emerging as an important element of a behavioral approach to human behavior (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). However, familiarity with functional contextualism requires a very solid understanding of the traditional learning theories as well as psycholinguistics. Therefore, we consider familiarity with that approach to be an advanced conceptual competency in behavioral assessment.

Because it is believed that behavior arises as a function of unique interactions among target behaviors and contexts, it is also believed that optimal understanding results when assessment, case conceptualization, and treatments are designed at the individual level (Haynes & O'Brien, 2000). Thus, behavioral assessment endorses an idiographic approach. In addition, because empirical methods are endorsed, case conceptualizations and treatment evaluation will rely on methodological and statistical procedures that are designed to evaluate data collected from an individual client.

The fourth characteristic of behavioral assessment is "behavioral plasticity" (O'Brien & Haynes, 1993). This assumption supports the belief that virtually any target behavior can be changed through the careful evaluation of its function and the use of learning principles to design an intervention. Therefore, it is believed that *any* behavior can be modified under the correct circumstances.

Finally, behavioral assessment espouses multivariate perspectives in which it is presumed that target behaviors and contexts are comprised of many, if not an infinite, number of elements. Further, there are an infinite number of ways that these behavioral and contextual elements can relate to one another. Some relationships will be correlational and some will be causal. Thus, behavioral assessments will emphasize multimodal and multimethod measurements with an aim of identifying the more important relationships among behavioral and contextual elements (Hayes, 2004).

In summary, behavioral assessment has several characteristics about why target behaviors occur, how behavior should be measured, the preferred level of analysis, the possibility for change, and complexity. These assumptions are evident in the use of specific assessment procedures that are designed to yield data from well-defined and validated measures of target behaviors and contextual variables for an individual client.

11.4.2 Conceptual Competencies 2: Psychometrics

An understanding of psychometrics is necessary for proper evaluation of behavioral assessment data. *Psychometrics* refers to a group of techniques used to measure and understand

cognitive-verbal, affective-physiological, and/or overt-motor responses. Consequently, it is a basic conceptual competency. Some of the more important psychometric concepts in behavioral assessment are: norms, reliability, and validity.

Norms. Assessment data provide the most useful information when an individual's performance can be compared to a reference point. This is the idea behind *norms*. As the name implies, norms are the average performance of a standardization sample on a given instrument. In addition to average performance, norms also provide information about the relative frequency of varying degrees of deviation above and below the mean. Norms serve two major functions: they provide context for a measurement value and they facilitate the interpretation of a measurement value.

During the construction of some behavioral assessment instruments, the instrument is initially administered to a large sample or a standardization sample. Norms are then developed from the resulting data. After normative data have been collected, raw scores on a measure can be converted to derived scores which are a relative measure of performance. Consequently, two types of comparisons can be made, individual to group comparisons and individual to self comparisons. The first is an evaluation of an individual's performance relative to the standardization sample and the second is a comparison of an individual's performance on one subscale to his/her performance on another subscale. Both comparisons provide context to raw scores that allow for more informed clinical decision making such as social significance or diagnosis.

Reliability. Reliability is a psychometric term used to describe the accuracy, consistency, and stability of scores obtained from an assessment instrument across varying contexts. Even the best assessment instruments are susceptible to *error*, or inaccuracies in measurement. A good measure, however, will have measurement error that is small, known, and stable.

A mathematical conceptualization of reliability is the ratio of true score variance to observed score variance and ranges on a scale from 0 to 1 with higher numbers reflecting more reliable measures. A number of different methods have been developed to calculate reliability when error is introduced through various situations.

Of particular relevance to behavioral assessment is *inter-rater reliability*, the degree to which two or more observers agree in their ratings of a target behavior. It is a quantitative appraisal of the variation introduced by the observer. Well-developed behavioral observation instruments typically provide explicit scoring instructions to raters to minimize variance among observers. The statistic used to report inter-rater reliability is dependent on the characteristics of the assessment instrument. Frequently, Pearson's *r* is used for continuous scores, Spearman's *r* is used for categorical scores, and *kappa or weighted kappa* is used for categorical ratings for multiple subjects.

Imagine a situation requiring the repeated measurement of a target behavior over time. Assuming that all extraneous variables are held constant and that the instrument being used is not affected by the passage of time, it could be reasonably assumed that changes in the score reflect actual changes in the target behavior being measured. *Test-retest* reliability is a means to assess the assumption that an assessment instrument is not affected by the passage of time. Test-retest reliability is assessed by using Pearson's *r* as a measure of the correlation between the scores obtained by an individual on a given assessment instrument at different times. Theoretically, reliabilities of this type should be higher for target behaviors that are relatively stable (e.g., metabolic rate) and may not be as useful for target behaviors that are expected to vary (e.g., mood).

At times it is important to know whether different elements of an assessment instrument are measuring similar or dissimilar target behaviors. The similarity or dissimilarity of target behaviors can be assessed with measured of *internal consistency*. A number of methods can be used to assess internal consistency. *Split-half reliability* can be obtained by splitting a test into two equivalent halves and then correlating the scores with one another using Pearson's *r*. Constructing two equivalent forms of a test measuring a particular construct is a technique used to determine *parallel forms reliability*. Another method, *inter-item consistency*, is attained by correlating all individual items of a measure with one another and then determining the mean inter-item correlation. The test statistics used for internal consistency are the Knuder-Richardson statistic (for measures with categorical responses) or Cronbach's alpha (used for continuous variable responses).

Validity. Even though a behavioral assessment instrument may be properly normed and have adequate reliability, it has limited utility unless it exhibits *validity*. An instrument is thought to be valid if it measures the construct that it is intended measure. There are several methods used to evaluate validity. A commonality in all methods is that they evaluate the extent to which the instrument that measures a given target behavior is associated with another instrument that measures that same target behavior or a similar target behavior.

There are a few types of validity most relevant to behavioral assessment. *Content validity* emphasizes the assessment of whether elements on an assessment instrument adequately represent the target behavior. There are two aspects to content validity. Content coverage refers to the notion of whether the items on an assessment instrument contain an adequate sample of the elements of the target behavior. Content relevance refers to whether items are clearly associated with the target behavior. For example, a self-report measure of depression would be lacking in content coverage if items were limited to the measurement of faulty cognitions and failed to examine other aspects of depression (e.g., affect, physical symptoms, etc.). Alternatively the hypothetical depression measure would be low in content relevance if the items intended to measure faulty cognitive processes assessed unrelated experiences (e.g., perceptual disturbances). Statistical tests are not used to measure content validity. Instead, the behavior therapist has to critically evaluate the instrument.

If an instrument correlates well with another criterion target behavior, it is said to have high *criterion validity*. Here it is important to note that the criterion should be a carefully selected, well-established measure or outcome. There are two subtypes of criterion validity, *predictive* and *concurrent validity*. High predictive validity is achieved when an instrument accurately predicts a future outcome that is related to the target behavior. Because chronic pain has an established association with occupational absenteeism (Munce, Stansfeld, Blackmore, & Stewart, 2007), the number of days of work that an individual misses in the next month may serve as an important criterion for a self-report measure of pain. The current relationship between an instrument and the criterion is termed *concurrent validity*. Researchers have documented a relationship between stress and insomnia (Bernert, Merrill, Braithwaite, Van Orden, & Joiner, 2007), so the relationship between daily ratings of stress and the number of hours of sleep at night can serve as a measure of concurrent validity. Pearson's *r* is used as the validity coefficient for criterion validity.

In summary, an understanding of psychometrics is essential for behavioral assessment. Norms are used to interpret an individual's score on an instrument relative to self or others and they are important for establishing social significance or a diagnosis. Reliability and validity provide information about the extent to which a behavioral assessment instrument will yield data that are accurate and clinically useful.

11.4.3 Clinical Competencies 1: Generating Topographical and Functional Analyses

The primary goal of behavioral assessment is to improve clinical decision making by obtaining reliable and valid information about the form and function of target behaviors. This primary goal is achieved when two subordinate goals are met: (a) objective measurement of target behaviors and (b) identification of contextual factors that exert important influences on target behaviors. To achieve the two subordinate goals, a behavior therapist must have competencies in processes used to generate operational definitions of target behaviors and contextual factors. Additionally, strategies for collecting empirical data about relationships among target behaviors and contextual factors must be developed and implemented. Finally, after data collection, effective evaluation procedures must be used to measure the magnitude of relationships between target behaviors and contextual factors. In the following sections, these basic assessment competencies are reviewed.

Generating a Topographical Analysis of Behavior and Context. A primary goal of behavioral assessment is to accurately measure target behaviors. To accomplish this, the behavior therapist must determine which behaviors are important and how they should be measured. Operational definitions are used to capture the specific and observable elements of target behaviors. When developing an operational definition, the behavior therapist should emphasize content validity. And, in line with the multidimensional assumption, it is expected that target behaviors will need to be operationalized in a number of different ways.

In order to simplify the operationalizations, we recommend that target behaviors be divided into three modes of responding: verbal-cognitive, physiological-affective, and overt-motor. The verbal-cognitive mode includes spoken words and myriad cognitive experiences (self-statements, beliefs, attitudes). The physiological-affective mode includes physiological responses, sensations, and emotional states. Finally, the overt-motor mode includes observable motor responses.

Once a target behavior has been operationally defined in terms of modes, the behavior therapist must determine which response parameters are most relevant. The most commonly used measurement parameters of target behaviors are frequency, duration, and intensity. Frequency refers to how often the behavior occurs across a specific time frame (e.g., number per day, per hour, per minute). Duration refers to the amount of time that elapses between target behavior onset and ending. Intensity refers to "force" or salience of the target behavior in relation to other responses emitted by the client.

In addition to determining which parameter of measurement will be used to quantify a target behavior, the behavior therapist will need to measure the relative importance of a target behavior if more than one is described by the client (which is most often the case). Ratings of importance (low, medium, high) can be reliably generated by the client in consultation with the behavior therapist (Haynes & O'Brien, 2000). These importance ratings are helpful in treatment design because the more highly rated target behaviors should be emphasized in the intervention.

For example a client's experience of public-speaking anxiety would include cognitive elements (e.g., catastrophic appraisals, scanning the audience for unhappy faces), affective-physiological elements (e.g., elevated heart rate, dry mouth), and overt-motor elements (e.g., trembling, voice hesitations, eye contact avoidance). Further, each of these elements could be measured in terms of frequency, intensity, and duration. Finally, the client could rate the importance of each set of target behaviors in terms of the degree to which they interfere with public speaking and/or cause social impairment.

Subsequent to generating operational definitions of target behaviors, the behavior therapist needs to generate operational definitions of contextual factors. Contextual factors are environmental events that exert important effects on the target behaviors. Contextual factors can be sorted into two broad categories: social/interpersonal events and nonsocial/environmental events. Social/interpersonal factors include interactions with other living beings – most typically people and groups of people. Nonsocial/environmental factors include interactions with the "nonliving" elements in the environment. Examples of nonsocial/environmental factors include the structure of the built environment, noise levels, temperature, work schedule, work load, and the like. These nonsocial/environmental causal factors tend to be understudied but can exert a significant impact on behavior. Consider, for example, the case of classically conditioned nausea and vomiting among chemotherapy patients. These patients can acquire a number of adverse immunological, emotional, and behavioral responses when they come into contact with smells, images, tastes, or sensations that are associated with the hospital setting where they undergo treatment (Zachariae et al., 2007).

The measurement parameters of contextual factors are similar to those used with target behaviors. Specifically, there is an emphasis on the measurement of frequency, intensity, and/or duration of contextual factor occurrence. Additionally, it is helpful to rate the clinical utility of a contextual factor (Haynes & O'Brien, 2000). The clinical utility rating is an estimate of the extent to which a particular contextual factor can be modified for the purposes of creating a change in target behaviors. For example, some important contextual factors can be unmodifiable (e.g., temperature, season, work characteristics, presence of a partner who is unwilling to participate in therapy, etc.). While these important contextual factors should be noted and understood as having an impact on target behaviors, they are de-emphasized in subsequent case conceptualizations and interventions.

In summary, the initial step in a behavioral assessment is the topographical analysis of target behaviors and contextual factors. The topographical analysis of target behaviors involves generating operational definitions of cognitive, affective, and motor responses. Additionally, importance ratings of the target behaviors are obtained. The topographical analysis of contextual factors involves generating operational definitions of intrapersonal, interpersonal, and environmental events that exert important causal effects on target behaviors. These contextual factors are then rated in terms of modifiability or clinical utility.

Estimating Relationships Among Target Behaviors and Contextual Factors. Once the topographical analyses of target behaviors and contextual factors have been completed, the behavior therapist evaluates interrelationships among target behaviors and contextual factors. In most cases, the emphasis is on identifying and evaluating a subset of all possible relationships – those that have causal properties. Reliable covariation between a target behavior and contextual factor is a critical index of possible causality. However, covariation alone does not imply causality. Causal relationships should meet three criteria: (a) temporal order – the changes in the causal variable should precede effects on the target behavior, (b) a logical explanation for the relationship (based on logic and learning theory), and (c) the exclusion of plausible alternative explanations for the observed relationship (O'Brien, Kaplar, & McGrath, 2004).

Three basic methods can be used to identify causal functional relationships. Each method has strengths and limitations in relation to causal inference and clinical applicability. The marker variable strategy is the most commonly used method of inferring causality. A marker variable is an easily obtained measure that denotes the presence of a causal relationship. Client

interview responses are typically used as marker variables. For example, a client's statement that his or her migraine headaches are almost always "triggered" by stress is taken as an index of a potentially strong causal relationship between stress and headaches in daily life. Marker variables can also be derived from self-report inventories specifically designed to identify functional relationships, structured interviews, and structured therapist–client interactions. The Motivational Assessment Scale (Durand, 1990) and the School Refusal Assessment Scale (Kearney & Silverman, 1990) are two examples of self-report measures that can be used to identify causal relationships.

The major advantage to the marker variable strategy is convenience. A behavior therapist can quickly identify potential causal relationships with a very limited investment of time and effort. The most significant problem with using marker variables is lack of validity. Specifically, the extent to which the most commonly used marker variables such as patient reports, self-report inventory responses, and in-session observation reflect "real life" causal relationships is undetermined. Thus, we recommend that when marker variables are used, the assessor should collect additional assessment data that will permit empirical validation of the hypothesized causal relationship.

A second procedure commonly used to obtain information about causal relationships is systematic observation of naturally occurring target behavior–causal variable interactions. Most commonly, assessors use client self-monitoring to evaluate causal relationships in this way. For example, a client may be instructed to record the daily levels of stress and headache activity to determine whether there is a causal relationship between these two variables. An alternative strategy is to have trained observers record target behavior–causal variable interactions. An example of this approach would be to have observers record the occurrence of a child's off-task behavior and social reinforcement in a class room setting.

Self-monitoring and direct observation methods can provide very good information about causal relationships (see special series on self-monitoring in *Psychological Assessment*, Volume 11, 1999). However, these techniques have two limitations. First, clients or observers must be motivated, well trained, and compliant with the procedures in order to obtain consistent, accurate, and reliable recordings. Second, as the number and complexity of the variables to be observed increases, accuracy and reliability decrease (Hartman & Wood, 1990).

The third method that can be used to identify casual relationships is experimental manipulation. Experimental manipulations involve systematically modifying a causal variable while observing consequent changes in target behavior (see special series on analog behavioral observation in *Psychological Assessment*, Volume, 13, 2001.). These manipulations can be conducted in the natural environment, analog settings (e.g., Iwata, Smith, & Michael, 2000), psychophysiological laboratory settings (e.g., Anthony & O'Brien, 1999; O'Brien & Haynes, 1995), and during assessment/therapy sessions (Tsai et al., 2008).

Data obtained from experimental manipulations permit strong causal inference. Further, experiments conducted in laboratory and analog settings can be arranged with modest investment of time and effort by the behavior therapist. There are, however, some limitations to this approach. First, the psychometric properties of experimental manipulations are not well known. Second, most demonstrations of the treatment utility of experimental manipulations have been limited to a very restricted population of clients (typically mentally retarded clients) who were presenting with a restricted number of target behaviors. Thus, utility of this procedure for identifying the target behavior–causal variable relationships may not generalize to other client populations and settings.

In summary, marker variables, observation of target behavior–causal variable occurrence, and experimental manipulations can be used to gather data on causal relationships. As Haynes (1992) noted, however, the strength of causal inference associated with each method varies inversely with clinical applicability. Experimental manipulations, self-monitoring, and behavioral observation yield high-quality data on causal relationships. However, each method requires significant effort and only a few target behaviors and causal factors can be reasonably evaluated. In contrast, the marker variable strategy provides data about causal relationships that has limited or unknown validity. However, it is easily conducted and can provide information on many target behavior–casual variable relationships.

We recommend using different methods at different points in the assessment. In the early stages of model design, the assessor can rely on marker variables so that many potential causal relationships can be identified. Later, after additional information has been collected on target behavior–casual variable interactions, the assessor can select a subset of important causal relationships and subject them to more intensive scrutiny using self-monitoring, observation, and/ or systematic manipulation.

Generating a Functional Analysis. Once target behaviors and contextual factors have been operationalized a working model of interrelationships among these variables needs to be developed. This conceptual model of interrelationships between target behaviors and contextual factors is the functional analysis which has been more formally defined as "the identification of important, controllable, causal functional relationships applicable to a specified set of target behaviors for an individual client" (Haynes & O'Brien, 1990, p. 654).

The functional analysis is a core methodology in behavioral assessment because it creates a conceptual model of behavior–context interactions which addresses the onset, maintenance, and modification of target behavior occurrence. Thus, the functional analysis can aid in treatment design. Failure to generate an accurate or complete functional analysis can reduce the effectiveness of treatments.

We have recommended that behavior therapists generate functional analytic causal models (FACM) to depict functional analyses. FACMs are vector diagrams that graphically depict the interrelationships among target behaviors and contextual factors for an individual client. Consider the patient described earlier in this chapter. As you may recall, the example involved a patient who was reported to be calling out for help inappropriately. The FACM for this patient is presented in ❯ Fig. 11.1.

The FACM identifies four contextual factors and three target behaviors which are interrelated in specific ways. Three contextual factors (help unavailable from others, no independent access to assistance, pain and discomfort) can be thought of as predictors of target behavior occurrence. One contextual factor can be thought of as the consequence of target behavior occurrence (in this case a negative reinforcer delivered by nursing staff in the form of social attention). The three target behaviors were derived from interviewing the client and conducting behavioral observations. The FACM specifies that when the patient encountered increased discomfort, no independent access to assistance, and unavailable help from others, she generated catastrophic appraisals (i.e., "Something serious may be wrong with me," "I may die if I don't get help.") which, in turn, brought about anxious activation. When her anxiety and catastrophic thoughts reached a high level of intensity, she would call out for help. After calling out for help, a nurse would respond to her and, in turn, her anxious activation and catastrophic thinking would be immediately and significantly decreased (negative reinforcement).

■ **Fig. 11.1**

Functional analytic causal model for calling-out behavior in a medical setting
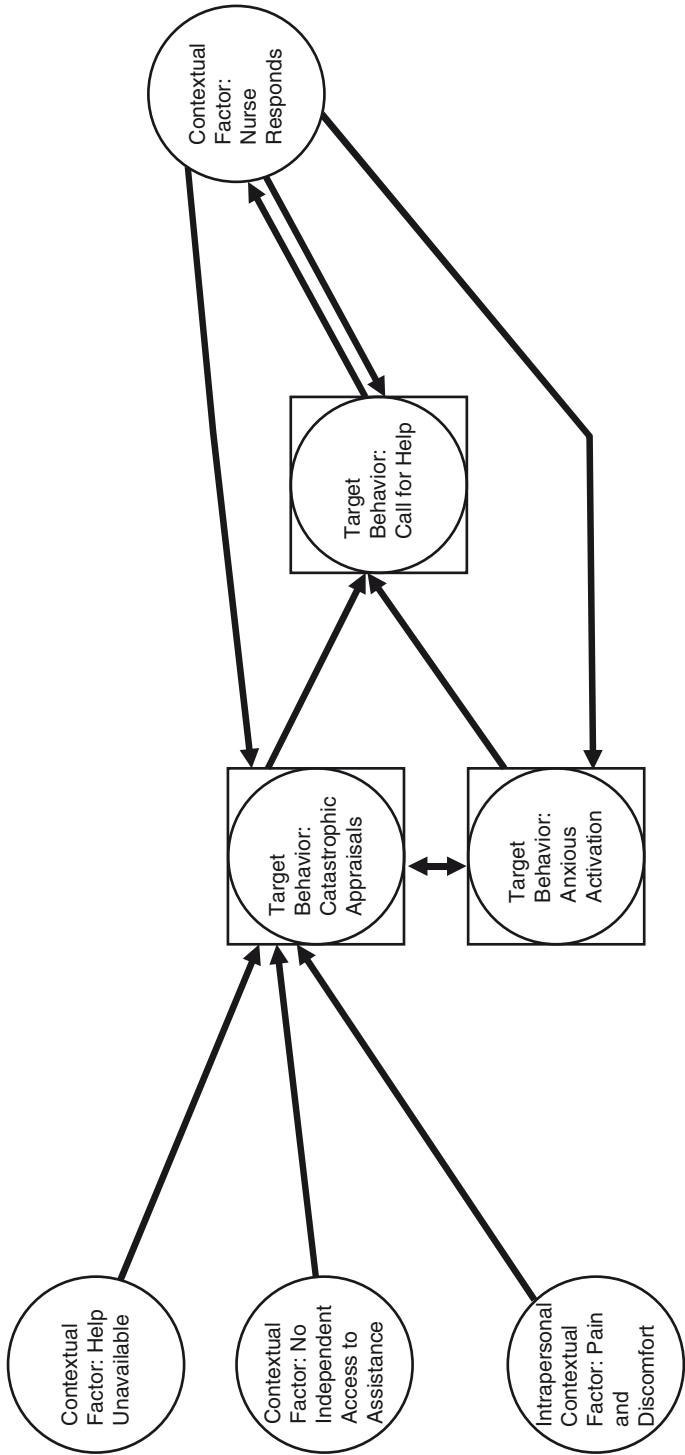
We have found FACMs to be useful in three important ways. First, FACMs systematize the clinical decision-making process and thereby encourage the therapist to consider the complex relationships that exist among target behaviors and contextual factors. Second, FACMs can provide an interpretable and parsimonious summarization of a functional analysis. Third, they provide guidance on treatment design. Using the current example, one examines the interrelationships among variables and notes where most vector lines converge. In this case, it is with nurse responses and also catastrophic appraisals. Consequently, the intervention should target modification of client beliefs about his or her vulnerability to catastrophic medical events and modification of nurse responding to calling-out behavior.

11.4.4 Clinical Competencies 2: Information Gathering Strategies

Thus far, we have described processes involved with generating a topographical and functional analysis of behavior. It is also the case that there are several unique clinical techniques associated with behavioral assessment. These techniques are used *in addition to* the many nonspecific clinical techniques that are used by behavior therapists such as rapport establishment, use of active listening, and providing empathic support.

Behavioral interviewing. Behavioral interviewing differs from other forms of interviewing in terms of structure and focus. Structurally, behavioral interviewing is designed to gather information about the topography and function of target behaviors. Topographical questions direct the client to describe the mode, parameters, and importance of target behaviors and contextual factors. Functional questions direct the client to provide information about causal relationships among target behaviors and contextual factors.

In terms of focus, client verbalizations are interpreted in two ways. When viewed as marker variables, client verbalizations are treated as an *index* of casual relationships between target behaviors and contextual factors. When viewed as target behaviors, client verbalizations are treated as a *direct occurrence* of the target behavior that was emitted during the interview itself. For example, a client may provide a vague response about factors that contribute to increased headache activity. This verbal response may be taken as a marker (i.e., that the causes of the client's headaches are unknown or inconsistent) or as a direct occurrence of a target behavior (i.e., the client has poor capacity for identifying cause–effect relationships).

Despite the fact that the interview is the most commonly used assessment method, few researchers have evaluated its reliability and validity. For example, Hay, Hay, Angle, and Nelson (1979) and Felton and Nelson (1984) presented behavior therapists with video-taped interviews of a confederate who was acting as a client and measured the extent to which the therapist observers agreed on target behavior identification, causal factor identification, and treatment recommendations. Low to moderate levels of agreement were observed on target behavior identification and causal factor identification. However, these studies were limited because the therapists could only evaluate information that was provided on a videotape which used another examiner's questions. Thus, they could not follow-up with clarifying questions or direct the client to provide greater details about various aspects of their target behavior. It is likely that observed agreement rates would be substantially different if interviewers were allowed to use their own questioning strategies. Further research is needed to improve our understanding of the psychometric properties of behavioral interviews.

Behavioral Observation. Observations are conducted by nonparticipant observers and participant observers. Nonparticipant observers are trained technicians who systematically record target behaviors and causal factors. Because nonparticipant observers are essentially hired to conduct observations, they are often able to collect data on complex behaviors, causal factors, and target behavior–casual event sequences. Although nonparticipant observation is a versatile assessment method, it is infrequently used in clinical settings due to cost.

Participant observers are persons who typically have a relationship with the client. In most cases, participant observers are family members, teachers, friends, or caregivers. Because participant observers are persons who are already involved in the client's life, they are able to conduct observations in many settings. However, because participant observers have multiple responsibilities, only a small number of target behaviors and causal factors can be reliably and accurately observed.

Self-monitoring. Self-monitoring is an assessment in which clients systematically record their own behavior. Because clients can access all three modes of responding (cognitive, affective, overt-motor) in multiple naturalistic contexts, self-monitoring has great clinical utility (see special section on self-monitoring in the December 1999 issue of *Psychological Assessment*). Self-monitoring has many advantages. As noted above, clients can observe all modes of behaviors with self-monitoring. Second, it can be used to monitor target behaviors that are private or concealed from others (e.g., drug use, sexual behavior). Third, self-monitoring often promotes improved client awareness of how contextual factors influence target behaviors. Finally, self-monitoring often promotes reductions in undesirable target behaviors and increases in desired target behaviors (Korotitsch & Nelson-Gray, 1999).

The main limitation of self-monitoring is observer bias. Specifically, a client may not accurately record target behaviors because of: expectations of positive or negative consequences, lack of awareness, inconsistent motivation, and use of criteria for target behaviors and contextual factors that is different from the therapist. Finally, noncompliance with self-monitoring is often quite problematic.

11.4.5 Summary of Basic Competencies

The basic competencies associated with behavioral assessment fall into theoretical/conceptual and clinical/technical domains. The theoretical/conceptual competencies include knowledge of the basic assumptions underlying a behavioral approach to understanding human behavior and knowledge of psychometrics. The clinical/technical competencies include knowledge of processes used to generate and summarize the form and function of target behaviors as well as specific skills used to conduct interviews, observations, and the self-monitoring of behavior.

11.5 Expert Competencies

11.5.1 Conceptual Competencies: "Third Wave" Behavioral Approaches

As the field of behavior therapy has developed, the characteristic assumptions, techniques, and goals that organize theory, assessment, and treatment have also shifted. These changes have been sorted into three "waves" of evolution (Hayes, 2004). The first wave is represented by the

development and application of interventions based on respondent conditioning (also called classical conditioning) and operant conditioning. The second wave can be thought of as a phase during which cognitive variables were incorporated into behavioral models as causal variables and target behaviors. The third wave of behavior therapy is exemplified by models that are based on functional contextualism. In the following sections, we will present the basic principles contained in each wave of behavior therapy and how they are relevant to behavioral assessment.

Wave 1: Respondent and Operant Conditioning Applied to Observable Target Behaviors and Contextual Factors. Drawing from the experimental works in respondent conditioning, the first wave behavior therapists conducted basic research that ultimately demonstrated how respondent conditioning principles could account for the acquisition, maintenance, and change in many target behaviors. An excellent example of this type of approach is evident in the work of Joseph Wolpe. Through careful experimentation on animals and humans, Wolpe (1952a, b) demonstrated that the anxiety states characteristic of "neurosis" could be induced using respondent conditioning. He also demonstrated that these same responses could be reduced using principles of experimental extinction and reciprocal inhibition (Wolpe, 1958, 1963, 1997; Wolpe & Lazarus, 1966; Wolpe, Salter, & Reyna, 1964).

Inspired by Wolpe, other researchers investigated how respondent conditioning could account for the acquisition and/or maintenance of many target behaviors in adults and children. Having established the link between respondent conditioning processes and various forms of psychopathology, researchers then set their attention on the use of conditioning principles to modify a wide array of target behaviors associated with anxiety disorders, eating disorders, mood disorders, sexual disorders, and psychophysiological disorders.

The other major learning theory explored during the first wave of behavior therapy was operant conditioning. Here, behavior therapists drew upon the theoretical and empirical work of Watson (1919), Skinner (1938, 1974), Hull (1952), and others to understand the ways that contingencies of reinforcement and punishment, stimulus generalization, stimulus discrimination, stimulus control, and extinction could account for the acquisition, maintenance, and change in target behaviors. Many types of behavioral interventions were subsequently developed using operant conditioning principles as the framework. Further, randomized control outcome trials and single-subject investigations demonstrated that these interventions were consistently effective.

The success of wave 1 interventions laid the foundations for the entire behavior therapy movement. Firmly grounded in experimentation and empiricism, early behavior therapists embraced a singular focus on the observable features of target behaviors and environments. As such, behavioral assessments emphasized measurement of observable target behaviors and contextual factors.

Wave 2: An Expansion into the Measurement and Modification of Cognitive and Emotional Experiences. As noted by Hayes (2004), the second wave of behavior therapy emerged out of a growing recognition that there were important aspects of human experience such as thoughts and felt emotions that were underemphasized in wave 1 formulations. It was not the case that basic conditioning principles could not accommodate these responses, rather it was that the early behavior therapists tended to reject the use of unobservable experiences as target behaviors or contextual variables. Moreover, Skinner argued (cf. Skinner, 1974, 1986, 1990) that thoughts and felt emotions were not necessary for reliable prediction of behavior.

The introduction of cognitive variables into behavior therapy was spearheaded by researchers who drew on the works of social learning theorists and cognitive psychologists. They took the position that cognitive variables functioned as important mediators between observable contextual factors and observable target behaviors. From this perspective, thoughts and emotions should be measured because they could account for unique variance in target behaviors. A prototypical model of this mediated relationship can be found in Beck's cognitive model of depression (cf. Beck, Rush, Shaw, & Emery, 1979). According to Beck and colleagues, depression arises from negative automatic thoughts about the self (incapable, helpless), one's life circumstance (unfair, uncontrollable), and one's future (hopeless). This "cognitive triad" is acquired through negative life experiences and is maintained by dysfunctional cognitive processes (e.g., overgeneralization, selective abstraction, dichotomous thinking) and more general cognitive structures called "schemas." The automatic thoughts, cognitive processes, and schemas are activated by specific contextual factors (e.g., exposure to a stressor) and lead to problematic behavioral and emotional responses such as withdrawal, guilt, sadness, and the like.

As cognitive variables were presumed to act as important causal variables, assessment techniques were developed to measure their occurrence and relationships with other target behaviors. In addition, cognitive therapy techniques were developed. These techniques were aimed at helping the client learn to identify, stop, confront, and/or nullify the problematic cognitive experiences. They also typically involved using logic, corrective experiences, and the rehearsal of alternative adaptive thoughts as a means for changing cognitive experiences. Importantly, wave 2 interventions also typically included components targeting behavior change using the respondent and operant conditioning principles established during wave 1.

The effectiveness of cognitive-behavioral interventions is very well established. For example, meta-analyses of the treatment outcome literature indicate that cognitive-behavioral interventions yield large and robust improvements in client functioning across a number of disorders (e.g., Butler, Chapman, Forman, & Beck, 2006).

Many of the core second wave assumptions are recently coming under scrutiny. Cognitive models presume that controlling or correcting maladaptive cognitive experiences is a necessary element of treatment. However, a large-scale component analysis study of the treatment of depression demonstrated that cognitive therapy techniques did not produce improvements over and above those obtained by techniques targeting behavioral activation alone (Jacobson, Martell & Dimidjian, 2001). Others have argued that it is not possible to effectively control the occurrence and intensity of cognitive experiences because they can arise spontaneously (Hayes et al., 2006).

In summary, wave 2 behavior therapies added cognitive variables into behavioral conceptualizations of disordered behavior. Skills and methodologies used to assess overt target behaviors were modified to include cognitive variables. For obvious reasons, these assessment advances relied heavily on patient self-report. The second wave also expanded on the first to include intervention techniques aimed at helping patients reduce the frequency, intensity, and/or duration of unwanted/target cognitions using principles of respondent and operant conditioning.

Wave 3: Functional Contextualism. The theory and application of models arising from the first and second waves of behavior therapy represented important gains for patients presenting with a wide variety of psychological difficulties. In recent years, however, a growing number of new behavioral interventions have been developed which are quite different from their predecessors.

Examples of these "third wave" interventions include: Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999), Dialectical Behavior Therapy (DBT; Linehan, 1993; Linehan et al., 2006), Functional Analytic Psychotherapy (FAP; Kohlenberg et al., 2004; Tsai et al., 2008) and Mindfulness Based Cognitive Therapy (MBCT; Hayes, Follette, & Linehan, 2004; Segal, Williams, & Teasdale, 2002). While all behavior therapies share the twin goals of prediction and influence of psychological events. The new therapies diverge from wave 1 and 2 therapies in terms of philosophical stance, theoretical formulations, and treatment aims. These differences have important implications for the methods and targets of behavioral assessment.

As noted by Hayes (2004), the third wave of behavior therapy represents a movement away from the positivism and cognitivism that is embedded in the first and second wave approaches and a recommitment to radical behaviorism which is founded on *functional contextualism*. The differences between these two philosophical stances are substantial. From the first and second wave point of view, overt behavior, cognitive events, and other "private experiences" (e.g., emotional experiences) can be broken down into constituent parts and the relationships among these parts can be studied/analyzed separately. It thus is logical to take the position that, for example, a thought such as, "I've been contaminated," might *lead to*, or *cause*, a problematic behavioral response such as excessive hand washing. The thought itself is identified as "dysfunctional" because it causes maladaptive behavior. Therefore, it is critically important to stop, alter, or otherwise control the occurrence of this thought in order to stop excessive hand washing.

In contrast to the positivistic stance just described, functional contextualism takes the position that cognitive, emotional, and motor responses occur in *relation to, and derive meaning from*, historical and ongoing internal and external events (Hayes, 2004). Consider again, the thought "I've been contaminated." From a functional-contextual perspective the thought is neither functional nor dysfunctional. It is simply a cognitive experience. What is important to assess is the relationship between the thought and other responses. Specifically, the focus is on whether the thought *is believed to be literally true and whether it is associated with* adverse or undesired behavioral outcomes. Thus, for example, if the thought is believed to be literally true and it is associated with adverse outcomes, then it would be targeted in an intervention.

Unlike second wave approaches, however, the goal of wave 3 interventions would not be to eliminate or control the occurrence of the thought. Correspondingly, the client would be encouraged to *not* attempt to control the thought but instead accept it as one of many cognitive experiences that occur thousands of times per day. Additionally, the client would be encouraged to use techniques that (a) reduce the extent to which the thought is believed to be literally true (e.g., defusion techniques) and (b) reduce the strength of its relationship with other target behaviors (e.g., mindfulness techniques that involve noting the thought and allowing it to occur without taking action). Finally, the client would be encouraged to acquire other behaviors that allow him or her to more fully pursue valued life goals (Hayes et al., 1999).

The implications of third wave innovations for behavioral assessment are becoming clearer and a great deal of research is needed. First, there is a pressing need to develop reliable and valid measures of key constructs such as acceptance, experiential avoidance, willingness, thought fusion, construction of the "self," values, and mindfulness. Second, there is a need to develop and validate case conceptualizations and/or FACM that depict client difficulties from a functional-contextual perspective. Finally, there is a need for a better understanding of how important principles derived from first and second wave approaches can be integrated with third wave assessments and interventions.

11.5.2 Clinical Competencies: Statistically Evaluating Behavioral Assessment Data

Once a FACM has been developed, the behavior therapist will typically want to measure the magnitude of relationships among variables. There are a number of methods available for accomplishing this task. In the two sections that follow, the more common approaches will be reviewed.

Some researchers have argued that intuitive data evaluation such as visual inspection of a line graph or scatterplot is an appropriate, if not preferred, method for evaluating behavioral assessment data. Arguments in favor of intuitive evaluation are based on convenience (it requires only a modest investment of time and effort) and clinical significance. In the latter case, it has been argued that visual inspection is conservatively biased, and as a result, a judgment that there is a relationships between two variables will only occur when the relationship is of moderate to high magnitude.

For example, we conducted an investigation in which graduate students who had completed coursework in behavioral therapy were provided with a contrived set of self-monitoring data presented on three target behaviors: headache frequency, intensity, and duration. The data set also contained information from three potentially relevant contextual factors: hours of sleep, marital argument frequency, and stress levels. The data were constructed so that only a single causal factor was strongly correlated (i.e., $r > .60$) with a single target behavior (the remaining correlations between causal variables and target behaviors were of very low magnitude).

Students were instructed to evaluate data as they typically would in a clinical setting, estimate the magnitude of correlation between each causal factor and target behavior, and select the most highly associated causal factor for each target behavior. Results indicated that the students predominantly used intuitive evaluation procedures (e.g., "eyeballing") to estimate correlations. The students also consistently and significantly underestimated the magnitude of strong correlations and overestimated the magnitude of weak correlations. In essence, they demonstrated a central tendency bias or guessing that two variables were moderately correlated regardless of whether or not they *were in fact* correlated. Finally, the students were able to correctly identify the most important contextual factor variable for each target behavior less than 50% of the time.

We further evaluated the potential limitations of intuitive data evaluation methods by surveying members of a large organization of behavior therapists (Association for Behavioral and Cognitive Therapies (ABCT)). Similar to the O'Brien (1995) study, we created a data set that contained three target behaviors and three potential contextual factors in a 3 × 3 table. The correlation between a target behavior and three contextual factors was either low ($r = .1$), moderate ($r = .5$), or high ($r = .9$). Participants were instructed to identify which of the three possible contextual variables was most strongly associated with each target behavior. Results indicated that when the true correlation between the target behavior and contextual factor was either low or moderate, the participants were able to correctly identify the correct contextual factor at slightly better than chance levels. When the true correlation was high, the participants' performance rose to only 72%.

Taken together, these results suggest that intuitive evaluation of behavioral assessment data is not well-suited for estimation of covariation which, as noted earlier, is critical for causal inference. As many decision-making researchers have argued, intuitive analysis of data similar to those described above, oftentimes results in inaccurate interpretations of clinical data

(Garb, 1996, 2005). One reason for this phenomenon is that confirmatory information or "hits" (i.e., instances in which the causal variable and hypothesized effect co-occur) are overemphasized in intuitive decision making relative to disconfirming information such as false positive misses.

A number of other biases and limitations in human judgement have been identified (cf., Chapman & Chapman, 1969; Einhorn, 1988; Garb, 2005; Kleinmuntz, 1990). A particularly troubling finding, however, is that a clinician's confidence in his or her judgments of covariation increases with experience, while accuracy remains relatively unchanged (Arkes, 1981).

In summary, intuitive data evaluation approaches can be convenient. Fundamental problems emerge, however, when clinicians attempt to intuitively estimate the magnitude of covariation between target behaviors and contextual factors. This problem is compounded when one considers the fact that multiple behaviors, multiple causes, and multiple interactions are encountered in a typical behavioral assessment. It is thus recommended that statistical evaluations be conducted, whenever possible, to evaluate the strength of hypothesized causal functional relationships. In the following sections, two statistical approaches are described.

Conditional Probability Analyses. Conditional probability analyses assume that functional relationships can be mathematically described as elevated conditional probabilities (James, Mulaik, & Brett, 1982; Schlundt, 1985). An elevated conditional probability indicates that the likelihood of observing a change in a target behavior, given that some hypothesized contextual factor has occurred (i.e., its conditional probability), is greater than the probability of observing a change in a target behavior without considering the occurrence of the hypothesized contextual factor (i.e., its base rate or unconditional probability).

To illustrate, let A = migraine headache occurrence, B = stress level (coded as high or low), and P = probability. A functional relationship between migraine and stress level would be inferred if the probability of experiencing a migraine headache given the presence of high stress ($P[A|B]$) is greater than the base rate probability of experiencing a migraine ($P[A]$).

Conditional probability analyses have important strengths. First, a small number of data points can yield reliable estimates of association (Schlundt, 1985). Second, the statistical concepts underlying the methodology are easily understood. Third, many statistical programs can be used to conduct conditional probability analyses or, if none are available, the computations can be easily done by hand. A limitation of conditional probability analysis, however, is that it can evaluate the interactions among only a small number of variables. Further, because it is a nonparametric technique, it can be used most easily when the target behavior and contextual factors are measured using nominal or ordinal scales.

Time Series Analysis. Time series analyses involve taking repeated measures of particular topographical dimensions of the hypothesized controlling variables and target behaviors across time. The magnitude of causal functional relationships then can be estimated by calculating a measure of association between controlling variables and target behaviors after partitioning out the variance accounted for by autocorrelation (Wei, 1990).

When the assessment data is quantified using nominal or ordinal scales Markov modeling and lag sequential analysis can be used to evaluate the magnitude of functional relationships (Gottman & Roy, 1990). With interval and ratio data, other time series methodologies such as Arithmetic Integrated Moving Averages modeling (ARIMA), hierarchical linear modeling, and spectral analysis can be used (Cook & Campbell, 1979; Hox, 2002; Wei, 1990).

Time series methodologies provide excellent information about the strength and reliability of functional relationships. They also can be used to examine the effects of contextual factors on target behaviors across different time lags. However, they require a minimum of approximately 50 points of measurement for reliable estimation of relationships (Gottman & Roy, 1990; Matyas & Greenwood, 1990) and can evaluate the interactions among only a few variables. Finally, the statistical theory and procedures are quite complex.

11.6 Summary

Behavioral assessment has been in existence as a research and clinical approach for several decades. It is continuing to exert an important influence on research and clinical practice. Behavioral assessment is based on learning theories and embraces functional contextualism, empiricism, idiographic measurement, and multivariate measurement. Further, relative to psychodynamic and personality-based approaches, behavioral case formulations are less susceptible to tautological reasoning. The advanced competencies in behavioral assessment are related to understanding the newly developed theories of behavioral problems and their associated interventions. Additionally, there is a clear need for researchers and practitioners to be familiar with the statistical tools needed to evaluate complex data that comprises a FACM. The evolution of behavior therapy has brought with it the need for behavioral assessment to expand the range and types of variables that are typically evaluated in clinical settings. In particular, there is a need for better measures of the key constructs associated with the third wave therapies.

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12 Behavioral Assessment with Children

Kathryn L. Humphreys · Brian A. Feinstein · Brian P. Marx

Abstract: Behavioral assessment, as opposed to traditional assessment, emphasizes the ante-cedents and consequences of behavior. The primary goal of behavioral assessment is to opera-tionalize behavioral excesses and deficits, such that the situations or events that precipitate the event and the responses to the event are reframed as causes and reinforcers of problem behav-iors. The information obtained via behavioral assessment can be used to create interventions that aim to alter those problem behaviors through the use of the environment. Although be-havioral assessment was initially concerned with strictly observable behaviors, the domain has expanded to include beliefs, attitudes, and emotional states. Interest in behavioral assess-ment with children specifically has increased dramatically since Ollendick and Hersen (1984) published the first text devoted to this topic. The use of behavioral assessment with children poses new challenges to clinicians who are accustomed to working with adult clients. This chapter intends to explain and provide specific examples of various behavioral assessment techniques that can be implemented with children, while emphasizing the unique challenges that present when working with such clients. The first half of this chapter is devoted to basic behavioral assessment competencies (e.g., behavioral interviewing, direct observation) that all clinicians who work with children should be familiar with and comfortable using. The second half of this chapter focuses on advanced behavioral assessment techniques (e.g., peer sociometry, psychophysiological assessment) that are likely to require additional, specialized training. It is our hope that this chapter will help clinicians who encounter child populations in their practice by refreshing their knowledge of basic behavioral assessment competencies and introducing more advanced behavioral assessment techniques that can be implemented with children.

12.1 Overview

Since the first text devoted to child behavior assessment was published in 1984 (Ollendick & Hersen, 1984), interest in behavioral assessment targeting children and adolescents has markedly increased. Much of the growth in the focus on child-specific assessment and treat-ment is due to the budding field of developmental psychopathology (Sroufe & Rutter, 1984). The focus on development and maturity is inseparable from the expression of symptoms in children and adolescents (Cicchetti & Rogosch, 2002). Cicchetti and Rogosch have also argued that adolescence is a time when the boundaries between normal and abnormal are less set, in part because mood swings and increased risk taking are common to the adolescent experience.

Child assessment differs from adult assessment in several ways. According to Boggs, Griffin, and Gross (2003), child assessment differs from adult assessment in that: (1) adults (not the children themselves) are typically the ones seeking services; (2) development and

developmentally appropriate behaviors are a focus; and (3) there is a greater use of informant information in child assessment. As the child is typically not the individual who is seeking assessment or treatment, it is helpful to involve multiple informants, such as parents, teachers, peers, other caregivers, previous therapists, physicians, as well as the child, to obtain information for the behavioral assessment. Clinicians should be open and honest about confidentiality issues with the child and parents, as they have a responsibility to both parties.

This chapter focuses on behavioral assessment with children and adolescents. Behavioral assessment differs from traditional assessment because of the behavioral theoretical framework (e.g., emphasis on antecedents and consequences of behavior) in which behavioral assessment is based. The behavioral framework aims to define and operationalize the problem behavior, and attempts to determine the best intervention strategy and evaluate the treatment (Reitman, 1998). The behavioral lens differs from traditional theory, as behaviorists assume that behaviors may not be consistent across all situations and that behaviors are not simply outward expressions of stable traits. The focus is on what the child *does*, rather than what the child *has*.

When using the behavioral framework, clinicians should use little inference and instead rely on the methods described within this chapter. Child behavioral assessment was at one point completely concerned with observable behaviors or potentially observable constructs (e.g., heart rate, skin conductance), but has broadened to include beliefs, attitudes, and emotional states (Cone, 1998; Hayes, Follette, & Follette, 1995), as long as the constructs are evaluated relative to appropriate standards (Barrios & Hartmann, 1986; Cone, 1998). There has been a shift from the traditional operant and classical conditioning perspective to include cognitive and affective components as well (Mash & Terdal, 1988).

The goal of behavioral assessment is to seek information to determine the purpose, cause, or function of behavior in order to create a functional analysis of the child's problem behaviors. A functional analysis identifies the causes or reinforcers of the problem behavior, and within the behavioral framework, the causes are usually social or environmental settings or events. The functional analysis should aid in the clinician's ability to identify the mutable environmental events so that appropriate interventions can be determined to change the current environmental dynamic. In addition, clinicians may want to use the assessment to confer diagnoses and evaluate treatment progress and outcome.

Parents are usually the first choice for information gathering regarding their child's problems. It is important that clinicians attempt to form a relationship with the parents. They need to be able to ask about how the parents respond to their child, what types of responses tend to elicit a particular response from the child, and which situations or responses tend to result in the most problematic behavior. Clinicians may also consider collecting information about the parents, as there are reciprocal behavioral relationships between children and caregivers. For example, parental psychopathology has been associated with inconsistent discipline and other negative parenting behavior (Johnson, Cohen, Kasen, Ehrensaft, & Crawford, 2006). Additionally, a reciprocal relationship has been found between maternal depression and childhood externalizing problems (Gross, Shaw, & Moilanen, 2008), so gathering information about the parents themselves can be extremely useful in better understanding the child's behavior.

The dynamic nature of interpersonal relationships should emphasize that children should not be simply passive recipients of what the environment gives to them. Traditional assessment

perspectives have viewed the subjects (in this case, children) to be passively responding to the environmental changes around them, thereby focusing on changing the environment. However, it is important for clinicians to keep in mind that the child can become engaged with self-directed decision making and can be an actor in the development of self-regulation skills.

Sometimes parents bring their child in for treatment or assessment with regard to behaviors that are developmentally appropriate or typical. It is important for clinicians to be prepared for parents to have unrealistic expectations and provide materials that enumerate developmentally appropriate behaviors. For example, parents may be concerned that their child is not demonstrating appropriate self-care skills in a timely manner. It would be useful to provide parents with information about when to expect the appearance of self-care skills, such as using the bathroom, feeding, and walking on their own. Clinicians should emphasize that there is a wide variability in the development of certain skills, and that it is important to maintain patience with children. A national study collected information about what adults know about child development and found that nearly half of the parents with young children think it will spoil a 3-month-old child if the child is picked up every time he or she cries (CIVITAS Initiative, Zero to Three, & BRIO Corporation, 2000). Additionally, 61% of parents with young children think that spanking is an appropriate form of punishment. Clarifying these myths and misconceptions may be one of the first steps of the assessment process as it will help provide a better parenting environment for the child as well as provide the parents with more realistic expectations of their children's behavior. In line with this, clinicians should be well-versed in the normative ranges for physical size, motor skills, language, cognition, and emotion across the age span, as all of these domains are important components in understanding the child and assessing the current state of functioning. Furthermore, sensitive normative comparisons are the foundation of diagnosis for disorders in the childhood years (American Psychiatric Association, 1994; Kamphaus & Frick, 1996).

This chapter is primarily concerned with early and middle childhood behavioral assessment, but many of the techniques described may be useful for a broader age range with tools specific to infancy as well as the late teenage years. In working with young children, clinicians must be mindful of the development of "theory of mind," which will affect whether children can attribute thoughts, desires, and knowledge to themselves and others. Having a theory of mind enables the ability to understand that mental states cause behavior, as well as predict the behavior in others (Premack & Woodruff, 1978).

This chapter intends to explain and give examples of the various behavioral assessment techniques that can be implemented in the assessment of children. The first group of assessment tools described in this chapter is the most basic and all clinicians who work with children should be familiar with the existence, purpose, and use of those tools. The second group of assessment tools described in this chapter is concerned with more advanced techniques that will require additional, specific training. For clinicians working with a child population, this chapter can help refresh the techniques that are available and provide suggestions as to which specific tools to use in particular situations. We recommend that interested readers seek additional information on the techniques explained in this chapter before incorporating them into their child behavioral assessment practices. Continuing education courses on the specific topics discussed below and further reading are typically the best option for clinicians who are interested in expanding their basic competencies.

12.2 Behavioral Interviewing

The behavioral interview is the first step in the assessment process. It sets the foundation for future interactions with the client throughout assessment and treatment. As such, being a competent behavioral interviewer is essential for any clinician. The behavioral interview is usually the first opportunity for the clinician to interact with the client and it helps to set the tone of the relationship. The behavioral interview is a comprehensive assessment, but should identify areas for future in-depth exploration. The use of a behavioral interview is common in clinical practice and, compared with other assessment tools, is relatively unstructured. Clinicians should use the interview to collect information on general and cognitive functioning, as well as specific problem areas and their environmental concomitants. In terms of identifying the targets for intervention, the behavioral interview is generally better able to do so than structured interviews, as the flexibility of an unstructured interview allows more pertinent topics to be focused upon and less relevant areas to be skimmed over or omitted altogether.

It should be noted that there is no standard for the behavioral interview. However, there is a general consensus among practitioners and theorists that the interview must have a beginning, middle, and end. Clinicians should begin with open-ended questions and continue to ask more specific questions later in the interview. The lack of a clearly defined structure for the behavioral interview may make the process somewhat difficult for those trained and comfortable with manualized interviews. The guiding concept, as with behaviorism in general, is to emphasize the current environment's antecedents, behaviors, and consequences (Sheridan, Dee, Morgan, McCormick, & Walker, 1996), as opposed to traditional psychological interviews that focus on more remote causes of behaviors (Gresham & Davis, 1988). In regard to behavioral assessment with children, behavioral interviews typically include several informants, such as parents, teachers, other caregivers, and the child. Depending on the age of the child, the use of multiple interviewers may be necessary to ascertain behavior in various social contexts, as different caregivers may have different experiences with the child and some behaviors may only occur at school or at home. For younger children, parents will be the primary interviewees in the assessment. However, for older children, clinicians may consider seeing the parents and child separately and spending equal time with both.

At the beginning of the initial session, clinicians should spend some time talking with clients about what will take place during that session. This includes introducing oneself and one's role in the assessment process and how involved you may be in treatment following the assessment. You should then restate what you already know about the client and explain that this session is mostly about gathering information, thus it will involve asking a lot of questions. One should also explain the types of topics that will be broached with the parents and the child, as well as the expectations both should have for future sessions. Behavioral interviews should take place in a private and quiet office or room. Clinicians should try to make the clients feel comfortable, use empathic, warm language, and maintain eye contact throughout the session. Bringing one's child in for a behavioral assessment can be intimidating and clinicians should acknowledge the difficulty the parents might have faced in making such a decision.

The goal of the behavioral interview is to gather information to help conceptualize the problem behaviors and contexts around those behaviors, rather than simply focusing on making a diagnosis. Clinicians should use the behavioral interview to objectively identify problem areas and form treatment plans, which are related processes (Hayes & Follette, 1992). It is likely that parents will bring their child in seeking help for a particular problem. However, the

behavioral interview allows for the exploration of other possible problem areas that could prove to be more pressing. Oftentimes problems do not present singularly, so a broad base of information should be obtained during the interview process.

The behavioral interview is the best time to gain insight into the family's financial situation, education level, ethnic background, and religious background. All of these factors may affect parental expectations for the child and perception of the presenting problem. Clinicians should also use the interview to ask about any pertinent medical conditions experienced by the child and/or parents, as serious illness in the family may be related to the expression of depressive or other problematic behavior. Specific topics to consider talking about during the interview are parent–child relationships, sibling relationships, peer relationships, school environment, and possible family changes, such as divorce. Regarding the necessary skills for performing a behavioral interview, Sharp, Reeves, and Gross (2006) suggested that clinicians should be able to create and maintain a positive rapport with the client, listen attentively to the client, and effectively communicate with the client using clear language.

Prior to the behavioral interview, the clinician should try to obtain as much information about the child as possible from the person who referred the patient to assessment. This allows the clinician to start making hypotheses about the specific problem areas to explore in depth during the behavioral interview. An interviewer should use operant conditioning concepts as well as a social learning perspective to create a functional analysis. Instead of deep inquiry into the immutable past, clinicians should focus mostly on the "now," as that is what can be modified.

Clinicians will need to go beyond simply identifying the problem. They must try to best operationalize behavioral excesses and deficits by clearly defining their frequency, severity, and duration. Although the parents may report that the child or the family is having problems in several areas, start by asking what is the most troublesome problem that they are facing right now. The aim should be to obtain a thorough account of the problem behavior – when it started, how often it occurs, and whether there have been any changes in the frequency or intensity. Some questions the clinician may want to keep in mind when conducting the behavioral interview include: Do the behavioral excesses or deficits only bother the child or do they affect others? What are the current negative consequences when the behavior is exhibited? Does the child seem to have control over the behavior? What may be reinforcing the behavior? What elicits it? As behaviorism's driving principles are set in conditioning and learning, the behavioral interview should attempt to understand the patient's problems as a maladaptive response that is sustained and altered by social surroundings (Beaver & Busse, 2000).

It may be challenging for the client to think systematically about the problem behaviors, so try to ease parents and children into thinking and talking in this manner. Clinicians should be flexible with the interview, as some parents will need more time to adjust to operationalizing the behavior and the social environment. The behavioral lens used to examine a child's problems may be difficult for some patients or parents. Oftentimes individuals may have already researched the problem issue and think that biological or other causes are to blame. Taking some time to explain how environmental causes and effects could reinforce behavior may be enlightening to those who are resistant to the behavioral perspective.

With this in mind, clinicians should try to avoid the use of inference and rather look for concrete information. Efforts should be made to obtain information on overt behavioral responses (e.g., increased food consumption) as well as covert responses (e.g., thoughts, feelings). Parents may be somewhat vague and/or nonspecific about problems with their child and

not attuned to specific antecedents. One should explain the purpose of the functional analysis and emphasize the importance of paying close attention to the antecedents and consequences of behavior. It may be useful to use language emphasizing the timing of events to model the use for patients. For example, with a child who experienced a trauma, it may be important to clearly define whether the child seems to be tense or fearful most of the time or if these behaviors appear suddenly following a reminder of the traumatic event. This can be accomplished by asking for examples and quantifying the length of time the behavior exists, the strength of the behavior, cases in which the behavior is stronger or weaker than usual, and whether the patient engages in any avoidant behaviors when they anticipate an event or setting that may trigger the emotional response.

When talking about potential antecedent's to the child's behavior, it is important for the clinician to keep in mind, and remind the parent, that antecedents are not merely unidirectional. The dynamic nature of a social environment means that the target behavior itself can elicit an antecedent to another behavior that is problematic (see O'Brien & Haynes, 1993). In this way, children could be perpetuating negating situations and conflicts. Difficulties or problem behaviors are often governed by learning principles, especially with children. They may have learned inappropriate responses or failed to learn more appropriate responses to certain situations. Although the situations can often be the source of problem behaviors being perpetuated, be careful not to assign blame to parents. Oftentimes, problematic responses are inadvertently reinforced, such as when a parent gives into a child's demand for a treat at the grocery store, only after the child repeatedly screams for the treat. Parents may be especially defensive of their parenting and reluctant to talk about any connection to their child's problem behaviors, causing them to potentially hide some important information. Be aware of this possibility and try to comfort the parents by acknowledging that you are not there to judge their parenting, but to assess the situation and look for ways in which it may be possible to intervene.

Although the behavioral interview is not a direct observation method of assessment, it provides an opportunity for the clinician to make behavioral observations and collect information about interpersonal behavior. Valuable information can be gained by simply observing the child's responses during a meeting. During the interview, the clinician should also keep in mind avenues for intervention. Obtaining information about the child's strengths and interests will be useful in planning future rewards for reinforcing positive behavior change. At the end of the session, close the interview with a positive note, encouraging the child and parents that treatment does help and acknowledge that they took a positive first step by seeking assessment and treatment.

12.3　Structured and Semi-structured Interviews

The use of structured and semi-structured interviews is an important component of child behavioral assessment and should be considered a basic competency that all clinicians should be trained in. The main goals of conducting a structured or semi-structured interview are to identify and quantify behaviors and symptoms, as well as to help in the diagnostic decision-making process. In behavioral assessment, it is recommended that the clinician begins the assessment with a behavioral interview to gain a preliminary understanding of the child's presenting problem behaviors and symptoms. Then, it can be useful to proceed with a structured

or semi-structured interview. There is a wide variety of structured and semi-structured interviews that can be used with children and adolescents. These interviews are commonly categorized by their structure (i.e., structured versus semi-structured) and by their orientation (i.e., symptom-oriented versus syndrome-oriented).

A structured interview is one that is intended to be read verbatim. This gives the interviewer no discretion on what to ask or how to ask it. Although it may feel restrictive not to be able to modify the wording of the questions, the use of a structured interview permits instrument standardization and the comparison with normative response data. For example, a clinician could administer the Diagnostic Interview Schedule for Children (Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000), a structured interview that assesses various forms of psychopathology (e.g., depression, anxiety). By following the scoring guidelines provided by the interview's creators, the clinician could determine whether the child meets diagnostic criteria for each disorder. This information could be used to gain a complete understanding of the child's presenting problem(s), which is imperative for adequate assessment and treatment planning. Conversely, a semi-structured interview provides the interviewer with flexibility on how to word questions and how to interpret responses. It is important to emphasize that the administration of semi-structured interviews requires more training than a structured interview, because the interviewer needs to be able to use some clinical judgment as to how to ask the questions and how to respond to the child's answers. One example of a semi-structured interview is the Anxiety Disorders Interview Schedule for Children (Silverman & Nelles, 1988), which could be used if the child has been described as exhibiting anxious behavior. This interview may be used to determine whether or not a child meets diagnostic criteria for an anxiety disorder as well as other related disorders, which will also help guide the rest of the assessment and treatment process.

The main difference between symptom-oriented and syndrome-oriented interviews concerns the arrangement of questions. Symptom-oriented interviews group all related items together, which is intended to make the interview less repetitive and more easily understood. On the other hand, syndrome-oriented interviews group questions according to disorder, such that questions about the same symptoms may be asked in relation to one disorder and then asked again, perhaps slightly differently, in relation to a different disorder. This structure is intended to adhere more closely to making a specific diagnosis. For example, a symptom-oriented interview would ask all questions related to sleep behavior in one section, whereas a syndrome-oriented interview would ask some questions about sleep behavior in relation to depression and then slightly different questions about sleep behavior in relation to mania (Orvaschel, 1995).

⊙ Table 12.1 provides information about several structured and semi-structured interviews that can be used in child behavioral assessment. All of the interviews listed have parallel forms that can be given to the child and an adult informant (e.g., parent, caretaker) and take between 60 and 90 minutes, per informant, to administer. Additionally, all of the interviews listed were developed for use with children and adolescents, thus they typically do not require extensive verbal expressive skills and are geared toward the language capabilities of younger children (La Greca & Stone, 1992). It is common for interviews to provide recommended age ranges, but some interviews provide additional questions or sections to administer to older children with content that does not apply to younger children. It is important that clinicians keep the age and developmental level of the child in mind, particularly when conducting a semi-structured interview. The less rigid structure of a semi-structured interview allows for the wording to be

■ **Table 12.1**

Structured and semi-structured interviews for child behavior assessment

Interview	Structure	Orientation	Description
Anxiety Disorders Interview Schedule for Children (Silverman & Nelles, 1988)	Semi-structured	Syndrome	Assesses primarily anxiety disorders; assesses other disorders for differential diagnosis
Child and Adolescent Psychiatric Assessment (Angold & Costello, 2000)	Between semi-structured and structured	Symptom	Assesses psychiatric symptoms; requires extensive training; has a version for young adults (18+), preschoolers (3–6), a shortened version, and a Spanish translation
Child Assessment Schedule (Hodges et al., 1982)	Semi-structured	Symptom	Assesses behavioral/emotional problems related to school, family, friends, and activities; typically administered to child and parent
Children's Interview for Psychiatric Syndromes (Weller et al., 2000)	Structured	Syndrome	Assesses Axis 1 disorders and psychosocial stressors; requires IQ of 70+; revised version extends into adolescence (6–18); provides opportunities to skip sections
Diagnostic Interview for Children and Adolescents (Herjanic & Reich, 1982)	Between semi-structured and structured	Syndrome	Assesses behavioral/emotional functioning; separate interviews for children and adolescents; particularly useful for younger children; requires highly trained interviewers; has computerized version
Diagnostic Interview Schedule for Children – Version IV (Shaffer et al., 2000)	Structured	Symptom	Assesses psychopathology; for ages 6–17; most widely used structured interview; has the most parallel versions and translations; has computerized version
Interview Schedule for Children (Kovacs, 1985)	Semi-structured	Symptom	Assesses psychopathology symptoms; easy language for children; particularly useful for depression
Interview Schedule for Children and Adolescents (Sherrill & Kovacs, 2000)	Semi-structured	Symptom	Assesses psychopathology symptoms; for ages 8–17; requires the most extensive training; time-consuming administration
Schedule for Affective Disorders and Schizophrenia in School-Aged Children – Epidemiological Version 5 (Orvaschel, 1995)	Semi-structured	Syndrome	Assesses current and lifetime Axis I symptoms; can adjust language for age appropriateness; most widely used semi-structured interview

modified in order to accommodate the developmental level of the child. Finally, when clinicians use both the child and parent(s) to obtain information, they should expect that responses will not always match. Research has demonstrated that children older than preschool age can self-report reliably on behaviors, cognitions, and experiences (Hodges, 1993), but preschool-aged children may be less reliable in their responses. It is recommended that clinicians integrate information gained from child and parent reports to obtain the most comprehensive and accurate understanding of the presenting problem.

When it comes to integrating interviews into behavioral assessment, it is important that clinicians pay attention to the age appropriateness of the interview, whether the child seems able to accurately and reliably self-report on behaviors, cognitions, and experiences, and the potential differences between a child's and an adult informant's responses to the same questions. Overall, interviews are a useful tool for collecting information about children's presenting problem(s), but should be used subsequent to, and in conjunction with, other assessment methods.

12.4 Rating Scales

In addition to structured and semi-structured interviews, clinicians can also use self-, parent-, and teacher-rating scales. The ability to use rating scales should be considered a basic competency for all clinicians who conduct child behavioral assessments. Traditionally, behavioral assessment did not involve the use of self-rating scales, because they do not assess observable behaviors. However, Kratochwill, Sheridan, Carlson, and Lasecki (1999) argued that self-rating scales are particularly important in child behavioral assessment because they provide information on the child's internal, subjective experiences, which are difficult to assess using other means. Currently, self-rating scales, as well as parent- and teacher-rating scales, are commonly used instruments in child behavioral assessment (Ollendick & Greene, 1998).

Rating scales should be used in addition and subsequent to other assessment techniques. A clinician could conduct a behavioral interview and follow up by administering a rating scale to objectively and quantitatively measure the identified symptoms and problem behaviors. There are several advantages to using rating scales, including their ease of use, low cost of administration, validity for assessing targeted behavior problems, objective scoring procedures that minimize the role of clinical inference and interpretation, and usefulness for a wide range of populations and problems (Ollendick & Greene, 1998). For example, if it is found out during a behavioral interview that the child is exhibiting aggressive behavior, it may be useful for the clinician to administer a rating scale such as the Children's Inventory of Anger (Nelson & Finch, 2000). This could provide the clinician with a quantifiable index of the child's level of anger and serve as a useful assessment tool to re-administer throughout the course of treatment. Similarly, instruments such as the Connors Parent Rating Scale (Connors, 1990) and the Teacher Report Scale (Achenbach, 1991b) could be given to the child's parents and teachers, respectively, to obtain information from adults in the child's life who see the child in various environments. The information obtained from these rating scales could be useful in assessing the environmental factors that may influence the problematic behavior as well as the frequency or severity of such behavior.

It is important for clinicians who plan to use rating scales to keep in mind that such measures do have limitations, many of which are similar to those inherent to structured and

semi-structured interviews, such as children's ability to report on their internal states and children reacting to demand characteristics. Research has demonstrated that children's reports of internalizing behaviors are internally consistent and relatively stable as early as first grade and children's reports are both concurrently and predictively associated with their ability on developmentally appropriate tasks (Ialongo, Edelsohn, Werthamer-Larsson, Crockett, & Kellam, 1994; Kellam, Rebok, Ialongo, & Mayer, 1994). Another potential limitation of self-report measures is that some children may react to demand characteristics by responding in socially desirable ways. For example, when asked to fill out a rating scale, a child might not endorse exhibiting certain behaviors that the child knows are inappropriate and cause for punishment. This can be addressed by using carefully worded instructions (e.g., "There are no right or wrong answers") or by using other measures that assess potential response biases (e.g., the Children's Social Desirability Scale; Crandall, Crandall, & Katkovsky, 1965) to assess the child's tendency to respond in a socially desirable way. Despite their potential limitations, rating scales are an efficient tool for objectively quantifying a child's problem behaviors and symptoms and can be effectively integrated into a child behavioral assessment protocol. ❯ Table 12.2 provides descriptions of several commonly used self-, parent-, and teacher-rating scales.

12.5   Assessment of Cognitive Constructs

Behavioral assessment was originally only concerned with behavior that could be directly observed. As the cognitive movement grew, clinicians began integrating reports of covert behavior (e.g., thoughts, feelings) into behavioral assessment. This has been controversial, as cognitive constructs, compared with traditional behavioral constructs, are more dependent upon the client's self report. Still, numerous cognitive-behavioral theories propose that cognitions (e.g., automatic thoughts, Beck, 1976; irrational beliefs, Ellis, 1994; attributional styles, Seligman, 1975) are the mechanisms through which behavioral and emotional problems operate. In addition to conceptualizing cognitions as antecedents to behavioral problems, cognitive constructs can also be conceptualized as consequences. For example, if a child is being teased at school by other children for being overweight, this could cause the child to experience negative automatic thoughts such as "I am worthless because I am overweight." In this case, the cognition is a consequence of the situation, rather than an antecedent to a behavioral problem.

As a result of cognitive constructs serving as potential antecedents to, and consequences of, behavioral problems, the assessment of cognitive constructs has the ability to improve behavioral assessment, diagnostic decision making, and treatment planning. This can be considered a basic competency and clinicians should be knowledgeable in techniques to assess cognitive constructs.

The fact that numerous cognitive constructs have been implicated in the development and maintenance of behavioral and emotional problems poses a challenge for clinicians. For example, Beck (1976) proposed that automatic thoughts (i.e., repetitive, automatic self-statements) are involved in behavioral and emotional problems, whereas Ellis (1994) implicated irrational beliefs (i.e., beliefs that are illogical or based on false assumptions) in the development and maintenance of emotional and behavioral problems. Thus, there are various cognitive constructs that may be at the core of each child's problems and it may be unclear to the clinician which construct(s) should be assessed. Ideally, clinicians would use multiple techniques on a

◘ Table 12.2
Self-, parent-, and teacher-rating scales for child behavior assessment

Scale	Rater	Description
Child Behavior Checklist (Achenbach, 1991a)	Parent/teacher	Assesses behavioral problems associated with internalizing and externalizing disorders; includes items about positive behaviors; has a social competence scale and a behavior problems scale; can be completed quickly (15 min); norms available for children (2–18)
Children's Action Tendency Scale (Deluty, 1979)	Self	Assesses externalizing behaviors (e.g., aggressiveness, assertiveness, submission) in children (6–12)
Children's Assertive Behavior Scale (Michelson & Woods, 1982)	Self	Assesses assertive behaviors in children (fourth–sixth grade)
Children's Inventory of Anger (Nelson & Finch, 2000)	Self	Assesses anger control problems in children (third–eighth grade); identifies situations that anger control problems occur in; uses pictorial responses; quick and inexpensive to administer
Children's Self-Report Rating Scale (Beitchman et al., 1985)	Self	Assesses the following factors: conduct problems, lie-immaturity, positive self-peer, worry, negative peer, antisocial-permissive, sensitive-emotional, and positive family, in children (6–13)
Connors' Rating Scales (Connors, 1990)	Parent/teacher	Assesses hyperactivity; the most common version (48-item) assesses the following types of problems: conduct, learning, psychosomatic, impulsive-hyperactive, and anxiety; also has Hyperkinesis Index that consists of the items most sensitive to pharmacological treatment
Eyberg Child Behavior Inventory (Eyberg & Ross, 1978)	Parent/teacher	Assesses conduct disorder within a behavioral framework; norms available for children (2–12)
Matson Evaluation of Social Skills (Matson et al., 1983)	Parent/teacher	Assesses deficiencies in social functioning; has an assertiveness/impulsiveness scale and an appropriate social functioning scale; can be completed by teachers or parents, but norms available for teachers only
Revised Behavior Problem Checklist (Quay, 1983)	Parent/teacher	Assesses psychopathology associated with conduct disorder, personality disorder, inad-equacy/immaturity, and socialized/delinquent personality; revision also assesses psychotic behavior; most commonly used rating scale; can be completed quickly (15 min); norms available for parents and teachers
Teacher Report Form (Achenbach, 1991b)	Parent/teacher	Assesses academic performance, adaptive functioning, and behavioral/emotional problems in children (6–18)
Youth Self-Report Form (Achenbach, 1991c)	Self	Assesses behavioral problems with the following scales: activities, social, total competence, total problems, internalizing and externalizing problems, and nine syndrome scales, in children (11–18); requires fifth grade reading level or can be administered orally

repeated basis to assess as many cognitive constructs as possible, but this is unlikely and impractical. Instead, clinicians should use the information gained from previous assessment techniques (e.g., behavioral interviewing) to guide the assessment of cognitive constructs. For example, if a clinician was to conduct a behavioral interview and learn that a child is displaying obsessive-compulsive behavior (e.g., hand-washing), it would be useful to follow up with an assessment of the child's automatic thoughts or irrational beliefs that occur before, during, and after the display of the hand-washing behavior. This could help the clinician to better understand what the child is experiencing that causes the child to engage in this particular behavior.

There are numerous techniques for assessing cognitive constructs, including the recognition method, recall method, and expressive method (for a more thorough description of each technique, see Linscott & DiGiuseppe, 1998). The recognition method, a technique that is commonly used in clinical practice, involves using a self-report instrument that asks the child to endorse thought items based on either their frequency or strength of belief. For example, if a clinician conducts a behavioral interview and learns that the child has been exhibiting depressed behavior, the clinician could administer the Dysfunctional Attitudes Scale for Children (D'Alessandro & Burton, 2006), which assesses the dysfunctional attitudes that are often associated with depressive symptomatology. This instrument could help the clinician confirm or disconfirm that the child is, in fact, suffering from depression as well as aid in determining whether or not maladaptive cognitions (i.e., dysfunctional attitudes) are a possible mechanism through which the emotional disturbance is operating. Additional instruments that can be used to assess cognitive constructs other than dysfunctional beliefs when using the recognition method include the Children's Automatic Thoughts Scale (Schniering & Rapee, 2002), the Hopelessness Scale for Children (Kazdin, Rodgers, & Colbus, 1986), the Children's Cognitive Assessment Questionnaire (Zatz & Chassin, 1983), and the Cognitive Triad Inventory for Children (Kaslow, Stark, Printz, Livingston, & Ling Tsai, 1992).

These instruments can be extremely useful in clinical practice, because they are easy to administer and interpret following the guidelines provided by the instruments' creators. Still, clinicians should be aware that a child who does not endorse the examples of the cognitive construct that the instrument assesses may still have thoughts that are related to that construct, but that are not specific examples used in the instrument. On a related note, these instruments may identify problematic cognitions that are not related to the presenting problem. For example, if a clinician was to administer a battery of cognitive construct assessment instruments, the clinician may learn that a child endorses having thoughts related to hopelessness. However, the child may be displaying anxious behaviors that are a more pressing problem to address. Further, the hopeless thoughts may be in response to the anxiety problems that the child is experiencing, thus it may be more useful to assess and target the anxious behavior than the hopeless thoughts. As a result, it is extremely important to choose cognitive construct assessment techniques that are based on the information gained from the use of previous assessment methods (e.g., behavioral interviewing).

Another regularly used technique for assessing cognitive constructs is the recall method, which requires the child to list the thoughts that occur before, during, and after a particular behavior or event. For example, a clinician may conduct a behavioral interview and learn that a child is exhibiting withdrawn and shy behavior at school. The clinician can use the recall method to have the child list the thoughts that are being experienced when the child is behaving in this manner as well as preceding and following this behavior. This information could be useful in gaining a better understanding of why the child is behaving in a particular way and how to proceed with assessment and treatment planning. Specific instruments have been developed for

assessing cognitive constructs using the recall method such as the Daily Record of Dysfunction Thoughts (Beck, Rush, Shaw, & Emery, 1979), but this method can also be used in a less formal way as demonstrated in the aforementioned example. Although it is common practice to have adult clients perform the recall method by listing their thoughts in writing, it may be useful to have children do so orally, depending on the level of their writing ability. A modified version of the recall method is the prompted recall method, which involves presenting the child with an audiotape or videotape of a conflict scenario and asking the child to provide the thoughts and feelings of the person in the scenario. A clinician may choose to use a prompted recall method with children who are particularly resistant to expressing their thoughts and feelings, because it is likely going to be easier for such children to talk about the thoughts and feelings that someone else may be experiencing than their own. When interpreting a child's response to the prompted recall method, it is important to keep in mind that it cannot be guaranteed that the child's responses reflect what their own thoughts and feelings would be in the same situation. It is also important that clinicians remain aware that children may modify their responses (in the recognition and recall methods alike) in order to present a more socially desirable view.

Finally, the expressive method requires children to speak their thoughts while simultaneously performing a task. This has been described as the best technique for assessing cognitive constructs (Merluzzi, 1993), but Kendall and Hollon (1981) pointed out that the act of thinking aloud may distort the content of the cognition. This technique may be particularly challenging for younger children, because they may find it difficult to think aloud while performing a task. The Articulated Thoughts in Simulated Situations paradigm (for a review, see Davison, Navarre, & Vogel, 1995) appears to be a promising expressive method. It requires the clinician to create simulated situations, based on the information obtained from a previous assessment technique (e.g., behavioral interviewing), and have the child report the thoughts and feelings that are experienced when the scenario is replayed. For example, if a clinician learned that a child is exhibiting aggressive behavior in response to receiving directions from parents and teachers, the clinician could create a videotape of a simulated situation in which a child is being given directions from an authority figure. The clinician could then ask the child to describe the thoughts and feelings that the child in the video may be experiencing while being directed to do something. This could help the clinician understand how the child views the experience of authority figures giving direction, in turn, helping to determine the next step in the assessment process.

It is important for clinicians to choose cognitive construct assessment methods that are based on information gained from the use of previous assessment techniques, thus being appropriate for the individual child's presenting symptoms and developmental level.

12.6 Direct Observation

Direct observation is the "hallmark of behavioral assessment with children" (Franz & Gross, 1998, p. 362). Observing children in the settings in which they naturally interact is the best method to clearly understand how the environment reinforces and interacts with the behavior. While the process of direct observation has a number of difficulties in practice, it is a very useful tool that clinicians should consider using in their practice when applicable, particularly when other assessment tools fail to provide accurate representations of behavioral antecedents and consequences. Although the skills involved in direct observation are a basic competency for all clinicians who interact with children, some techniques involved in the coding systems used in direct observation are more advanced and may require specific training.

Perhaps the greatest benefit to direct assessment is that you no longer have to depend on self- or adult informant-report, which may provide biased representations of the problem behaviors, especially because of recall bias. The direct observation of behavior by an unbiased observer allows for an objective account – a real-time tally of the frequency and duration of target events. Overt behavior (e.g., hitting) as well as verbal behavior (e.g., number of words spoken) can be quantified. Behavioral assessment does not aim to understand or define underlying traits, but instead identify current behavior under current environmental circumstances (Barrios, 1988). The primary goal is to quantify the behavior. In this way, it is similar to the atheoretical approach of the Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition (DSM-IV; American Psychiatric Association, 1994). The DSM-IV confers diagnosis based on behaviors to define the presence of symptoms. The behavioral observation goes beyond simply documenting symptoms for the purpose of making a diagnosis, as behavioral observation seeks to identify the potential environmental predecessors of specific behaviors.

Direct observations that take place in a natural setting are most likely to elicit the genuine pattern of behavior. However, natural observations are often so cumbersome that they are unlikely to be used in clinical practice. It can be time-consuming to travel to the natural setting (e.g., home, school) as well as difficult and/or expensive to find impartial raters. Further, the mere addition of new people into the setting may be considered intrusive. An alterative to direct observation within a natural setting is using an analog direct observation in a location more convenient to the clinician and agreeable to all parties involved.

One should prepare for a direct observation by defining exactly what target behaviors will be noted. For either natural or analog settings, it is important to have a clear coding system on which observers are properly trained. For example, if parents report that their child repeatedly bites them, then the biting is identified as the target behavior. If the biting primarily takes place at home, then the observation should ideally take place at the child's home. Observers should pay particular attention to the events that occur directly before the biting and the reactions that take place immediately after the biting. Beyond this, each behavioral excess or deficit should be clearly defined for each observer using a written training manual. The manual should include exemplars for the target behavior as well as borderline examples and how decisions in each case should be made for coding purposes. The best possible choice for observers would be trained independent observers. However, this option is not always feasible, particularly for use in clinical practice. Other options for observers are adults involved in the child's life, including parents and teachers (Loeber, Dishion, & Patterson, 1984).

When finding a coding system for the observers to use during the direct observation, one can create definitions of behavior based on clinical experience or use definitions created by others who have studied the particular problem behavior. It is important to use more than one independent observer when coding information from direct behavioral observation, as this allows interrater reliability, or the degree of agreement between raters, to be assessed. This is an important construct to assess, because poor interrater reliability may suggest that the coding system is flawed or the raters need additional training to ensure that they are coding in the same manner. If you decide to create your own system, be sure to define specific acts and not the emotions inferred behind them. For example, foot tapping should be coded as opposed to "nervousness" and laughter should be coded instead of "joy." Prior to the observation, various possible antecedents or consequences should be identified and appropriate coding should be assigned to those acts. ❯Table 12.3 provides basic information on several coding systems that can be used in direct behavioral observation.

■ **Table 12.3**

Coding systems for direct behavioral observation with children

System	Naturalistic/ analog	Age	Description
Classroom Observation Code (Abikoff, Rachel, & Donald, 1977)	Naturalistic	6–12 years	Measures children's classroom hyperactivity levels while in and out of their seats; observation categories: interference, solicitation, attentiveness, minor motor movement, gross motor movement, noncompliance, time out of chair, physical aggression, threat or verbal aggression, aggression towards teacher, extended verbalization, daydreaming
Compliance Test (Roberts & Powers, 1988)	Analog	2–8 years	Measures children's responses to standardized parental commands; observation categories: compliant and non compliant behavior of child
Family Interaction Coding System (Robinson & Eyberg, 1981)	Naturalistic	4–8 years	Measures quality of parent–child social interaction; observation categories: verbalization (e.g., direct command, labeled praise, neutral talk), vocalization (e.g., positive or negative tone), physical behavior (e.g., positive or negative touch), and response behavior (e.g., compliance to command, no opportunity to comply, answer to question)
OCD Behavioral Avoidance Test (Barrett, Healy, & March, 2003)	Analog	7–16 years	Measures objective information relating to behavioral responses to exposure to feared stimulus; observation categories: fear avoidance (e.g., distance to object), symptomatic distress, ritualizing
Preschool Observation Scale of Anxiety (Glennon & Weiz, 1978)	Naturalistic	2–5 years	Measures children's anxiety levels; observation categories: physical complaint, desire to leave, expression of fear or worry, vocal distress, posture, etc.

The coding systems detailed in ❯Table 12.3 are good examples of coding systems for use with many presenting problems. However, some clients will have unique needs for observation. In these cases, the behavioral interview should provide information about the behavior in question as well as when and where it takes place. When possible, try to schedule the direct observation in the settings in which the child is most likely to exhibit the target behavior. For more general behavior problems, such as social phobia, it may be possible to stage a direct observation at many locations. If a child is particularly fearful of speaking in front of a group, one can find an audience in the child's family or using volunteers from across the hall. The first observation could start with the group the child is more comfortable speaking in front of, with a given task of talking for a few minutes without a break. This observation may help to inform the difference between the behaviors in a more comfortable setting when compared with the same task but in front of strangers. During the task, observers could note the duration of speech, amount of eye contact, "ums" and "uhs," and fidgeting behavior.

Instruments like recording devices or computers can be implemented to ease in the data collection and analysis. This may be particularly useful given the potentially high costs for hiring personnel to observe, code, and analyze the results. If real-time coding for multiple coders is difficult or intrusive (e.g., several adult strangers in the home may be hard to ignore for both the parents and child), the use of a video recorder could be a helpful alternative. Another tip for coding is to use time stamping to determine the duration of a behavior. Instead of determining duration using a stop-watch, the observer can simply record the time in which the target behavior began and a second note at the time the behavior stopped. These two times will provide an easy way to calculate the length that the behavior occurred. The time of day should be noted during the behavioral observation. To be thorough, a clinician may consider sampling the child's behavior several times a day to determine the frequency during each time period and whether activity level or fatigue affect the behavioral frequency, intensity, or duration as well as any differences in antecedents and consequences.

Although direct observation may be the most accurate method to collect information about behavior, there is still the possibility that observers will be inaccurate. One type of inaccuracy to be aware of is observer bias, which is the tendency for observers to unintentionally distort their observations, and therefore coding, based on internal biases and prejudices. Those using behavioral observation should be aware of the possibility of observer drift, the phenomenon of observers changing in their coding of the same observations over time. Observer drift can be minimized by additional trainings throughout the observations.

Observer reactivity may be one of the greatest limitations to direct observation. Similar to the Hawthorne effect (discussed in Olson, Verley, Santos, & Salas, 2004), individuals being observed may change their behavior due to the presence of the observer. The presence of an observer may lead to observer reactivity, in which children may be less likely to engage in behaviors they know to be negatively viewed and more likely to engage in behaviors they know to be positively viewed. Reactivity reduces over time (Harris & Lahey, 1982), so it may be worthwhile to be in the room for some time before the actual recording of observation. Using a covert observation style (e.g., a one-way mirror) or videotaping may also reduce observer reactivity.

A final note is regarding the interpretation of the codes following the direct observation. In order to make appropriate judgments based on direct observations, one must be familiar with norms for the age group. Developmentally appropriate behaviors should be considered when determining whether the target behavior is truly a "problem." For example, temper tantrums

are common among 2- and 3-year-olds, but the same behavior exhibited at age nine is clinically relevant and should be targeted for intervention.

12.7   Self-monitoring

As an assessment tool, self-monitoring gives the reigns to the patient in order to maintain a record of identified problem behaviors. Self-monitoring is used to determine the actual frequency and severity of the problem, and in line with the goals of behavioral assessment, to identify the antecedents and consequences to and from the behavior. It may be preferable to other types of assessment because self-monitoring allows for continuous monitoring of the problem behaviors and context, and therefore will likely provide a more accurate description of the problem than retrospective reports.

Self-monitoring has many benefits, but it should be noted that this technique may be challenging for children. It requires dedication and significant effort, and the clients must be able to attend to their problems and remember to keep an accurate and up-to-date record. For these reasons, self-monitoring works better with certain clients; in particular, older children are better candidates for this assessment strategy. Research on self-monitoring in children (although not solely as an assessment tool) has shown the technique to be useful and effective with various problems such as internalizing disorders (Beidel, Neal, & Lederer, 1991; Stark, Reynolds, & Kaslow, 1987) and weight loss in obese children (Germann, Kirschenbaum, & Rich, 2007; Kirschenbaum, Gernmann, & Rich, 2005).

One can implement the use of self-monitoring as an assessment strategy for a variety of behavioral problems. For children who have difficulties in controlling their weight, you may ask them to create a record of the items they consumed in the day and at what time. It may be difficult for children to accurately log their caloric intake, but basic information about the type of food and time of day it is consumed is a good start for identifying areas for improvement.

Clinicians should try to tailor the method of self-monitoring for the particular child. Setting a particular time of the day for record keeping may be best for children who are easily distracted or have busy schedules (e.g., extracurricular activities and shared custody). Adapting the self-monitoring task to better suit the abilities of the child and his or her family will increase motivation as well as the likelihood of engaging in the task.

Structured logs can be created and personalized for children given their particular presenting problems. For example, one should adapt the type of log that is required to a client's ability to self-monitor (e.g., a log sheet which requires only that they mark off when he or she is reprimanded for being off-task at school). For whichever system of record keeping is chosen, instructions must be clearly delineated such that the child knows when, where, and how to record responses. If possible, try to encourage motivation for task completion, as a complete record may be an invaluable assessment tool for gauging information about the problem, designing an intervention, and assessing treatment outcome.

In addition to structured logs, diaries are frequently employed in self-monitoring. Diaries are preferable when the target behavior involves more complex thoughts and emotions and when the children are able to identify antecedents to those thoughts and feelings. Researchers have used self-monitoring to obtain records of emotional reactions to situational contexts among depressed adults (Beck et al., 1979; Jarrett & Nelson, 1987). Silverman and Serifini

(1998) have successfully used a "daily diary" with older children. The diary provides a record of the child's daily experiences with their targeted problem. For example, children who experience social phobia can record the number of times they felt afraid to speak to others in the day, the time of day that they experienced fear, the intensity of the fear on a 1–10 scale, and events that immediately preceded the experience as well as what happened afterwards. For those children who are able, it may be useful for them to write down their exact thoughts at the time of the event.

Reactivity to the act of self-monitoring (similar to observer reactivity in direct observation) can occur with this assessment approach. Self-monitoring has also been used as a treatment (Germann et al., 2007; Kirschenbaum et al., 2005), as children are both the observer and the recorder of their behavior, which emphasizes the control one has over their own actions. Because of the possibility of reactivity, children should be instructed not to change their behavior as a result of the monitoring, as reactivity (usually in the desired direction) may impair the ability to obtain an accurate portrayal of the problem behavior prior to treatment. Additionally, having the recording take place post-behavior, rather that before the behavior occurs, can help to reduce reactivity. When considering the use of self-monitoring as a treatment vehicle, reactivity may be encouraged. However, for the initial assessment stages, make sure to remind the children to behave the same as usual while completing the task.

Although self-monitoring may be difficult when the client is a child, it is still possible to effectively use this tool. Perhaps the greatest challenge to effectively implementing this assessment approach is compliance. Compliance may be particularly difficult to obtain in younger and/or oppositional children. Thoroughly explaining how to complete the task, as well as explaining the reasons for the task, may help to improve compliance. Additionally, compliance with self-monitoring has been shown to be higher when the family is involved in the task (Germann et al., 2007; Kirschenbaum et al., 2005). Another option to improve the effectiveness of self-monitoring is the use of a more obtrusive monitoring device. Having the child wear a watch to count the frequency of the behavior is one option. Amato Zech, Hoff, and Doepke (2006) used a MotivAider device that vibrated and beeped to remind students of times to record their behavior.

12.8   Motor, Sensorimotor, Language, and Cognitive Development

Bloom (1956) stated there were three domains of human development – motor, affective, and cognitive. There are several measures designed to assess growth and maturity. While it is possible to think of these domains as independent, it is important to recognize how the three intersect and affect each other. The purpose of this section is to discuss domains of development that should be considered when working with child clients, as well as to give examples of techniques that can be used to assess those domains. Although it is most common for clinicians to be more oriented to the affective areas of impairment, they should also be attuned to motor, sensorimotor, language, and cognitive development. Clinicians need to keep an open mind as to the source of problems, as medical or environmental issues may be the cause of some behavior problems or poor performance on tests. Particularly with very young children, parents may bring their child to a psychologist for problems they perceive as being in the affective domain, whereas the problem may fall outside of the emotional domain. Assessing the various areas of

human development can help to rule out problems or disorders or to further investigate the extent of a hypothesized problem.

When meeting with the child, be aware of the signs of neglect or physical or sexual abuse. Signs of abuse include injuries, bruises, and scars, often accompanied by an unclear or inconsistent explanation of the cause (Blackman, 1997). Signs of neglect one may notice are poor hygiene and delays in development such as stunted height or low body weight. A young child engaging in sex play or use of inappropriate sexual conversation may indicate the possibility of sexual abuse in the child's past.

Pay attention to motor, cognitive, language, and perceptual abilities. You will need to decide whether the child's behavior is developmentally appropriate for the age of the child or whether the behavior is non-normative. In order to do this, all clinicians who see children should be familiar with basic normative motor, speech, and cognitive developmental stages. Has the child reached all of the developmental milestones appropriate for his or her age? If not, this knowledge may help to produce hypotheses into what needs to be assessed further and give insight into the child's own difficulties interacting with the environment.

Progression in skills over time is the general expected developmental trajectory. Although leveling off and small periods of regression may be common in development, the typical child will continue to show great advances in motor, speech, and cognitive skills as they age. A standstill in progression or regression that lasts several months in early infancy may be a red flag for a developmental disability. For example, if you notice a 2-year old refraining from using words or motions to communicate, it may be a sign of autism. Children with autism or other developmental disorders have abnormal social interactions in which they have severe impairments in reciprocal social communication (Blackman, 1997).

All clinicians should have some basic knowledge about the normative development of language. Deficits in speech may indicate a language delay that is related to a learning disorder, mental retardation, or autism. Children between the ages of 18 and 24 months should be able to produce word combinations, understand and respond to names of objects, and follow simple commands (Olswang & Bain, 1988). Between the ages of 2 and 2.5 years, children should be able to ask and answer simple questions. Between the ages of 2.5 and 3, children should be able to display a greater understanding of grammatical rules (e.g., correct verb tenses and use of plural nouns).

Before administering an assessment for language, motor, or cognitive skills, the clinician should take time to calmly and patiently discuss the process with the child and parents. Assessments for these skills may be particularly anxiety provoking given the repercussions of a disability diagnosis. Explain to parents the length of the assessment and specifically what you will be assessing. After the session, make sure to share the test results with the parents. This type of communication is typically conveyed best in person, especially if the assessment results indicate the possibility of a disability. If this is the case, the child's school and teachers should also be informed of the assessment results.

There are a handful of disorders to keep in mind when you see a child with motor, language, or cognitive difficulties. Cerebral palsy, a condition that occurs in one out of every 500 live births, is a non-progressive condition that causes physical disability and is usually detected within the first 12 months of the child's life. The disorder is marked by a history of delayed developmental milestones. Children with cerebral palsy will have delayed motor skills, but normal language and visual-motor abilities. On the other hand, children with mental retardation may have normal monitor skills, but display delays in language and visual-motor abilities.

For very young children who may exhibit difficulties in these areas, one may consider using the Capute Scales. They were originally developed in the 1970s to assess language and visual-motor abilities in children with a cognitive age of 36 months or younger. One method to test motor skills in older children (ages 3–10 years) is the Test of Motor Development (Ulrich, 1985). This assessment takes approximately 15 minutes to administer and assesses 12 motor skills (i.e., run, gallop, hop, skip, horizontal jump, leap, slide, two-hand strike, stationary ball bounce, catch, kick, overhand throw).

For a broader assessment of the child's functioning, The Bayley Scales of Infant and Toddler Development, Third Edition (Bayley, 2006), is norm-referenced and commonly used. It is a quantitative evaluation composed of three scales that the child completes and two scales that the parents complete about the child. The child scales are cognitive, motor, and language, and the parent scales are social, emotional, and adaptive behavior. Each scale can be administered individually or as a complete assessment. The time for a complete assessment is 30–90 minutes. The Bayley Scales-III was designed to be used with children between the ages of 1 and 41 months.

A more comprehensive assessment for an older age group is the Battelle Developmental Inventory-2 (Newborg, 2005), a developmental assessment for early childhood (birth to age 8 years) that can be administered to the child or parent. It consists of a screening test that takes between 10 and 30 minutes to administer, while the full assessment takes between 1 and 2 hours to administer. This norm-referenced inventory assesses five domains – affective, cognitive, communication, motor, and personal-social. A notable benefit to the Battelle Developmental Inventory is that it was standardized on a population that included children with developmental delays.

In order to assess intelligence, the Wechsler Intelligence Scale for Children – Fourth Edition (WISC-IV; Wechsler, 2003) can be used. The WISC-IV assesses verbal comprehension, perceptual reasoning, working memory, and processing speed by creating indices based on the results of ten subtests. The administration time varies depending on the child, as younger children may need more breaks and take more time to complete the untimed portions. For children with possible learning disorders or attention problems, the General Ability Index may provide a more informative assessment of intelligence because it is less influenced by processing speed and working memory.

When interpreting the results of any norm-referenced instrument you should keep in mind that the majority of the assessments provide the normative information for a specific population that may not include your client (often based using an American, nondisabled population). Some ethnic groups tend to have smaller children than other groups, on average, in terms of height and weight. Therefore, a specific child may be classified in a lower percentile using the typical American normative percentiles, but not when compared to other infants from their specific ethnic group. Also, test results for children with physical or mental disabilities may not accurately reflect their abilities for a variety of reasons, particularly if the assessment was not created using other children with disabilities in the sample. Being aware of developmentally appropriate behavior in children should be a basic competency for clinicians who encounter young people in their practice. The developmental plateaus or even regressions are often what parents notice as problems in their child and could be the reason they are seeking assessment and treatment. Every clinician should be familiar with the domains of human development and potential assessment tools to implement given the various types of presenting problems.

12.9 Advanced Competencies

The behavioral assessment techniques that have been described thus far, are basic competencies that all clinicians who work with children should be knowledgeable about and proficient in. The remainder of this chapter will describe more advanced techniques (i.e., peer sociometry, virtual reality assessment, and physiological and biological assessment). These techniques differ from the previously described basic competencies in that they require additional, specific training. As mentioned previously, we recommend that interested readers seek additional information on the techniques, particularly the advanced techniques, before incorporating them into their child behavioral assessment practices.

12.10 Peer Sociometry

Sociometry is a quantitative method of measuring social standing and relationships among individuals in a group. The informants being assessed with sociometric measures are often the client's peers, so the target constructs tend to be traits or qualities (e.g., do you like to play with [client's name]?) instead of objective social skills. This form of measurement is most often used with children in school settings, and although it provides clinically useful information, it is primarily used in social research as an assessment technique. The target variable can vary depending on the area most interesting to the researcher or clinician. Typically, target variables are acceptance, preference, popularity, and visibility (Mpofu, Carney, & Lambert, 2006), which are all proxies of social standing. Most commonly, classmates provide the information on these target variables, although in some cases adult informants (i.e., teachers or caregivers) may provide sociometric data.

Obtaining data on peer relations from individuals other than the client allows the clinician to obtain an independent view of the child's social standing and areas that may be strengths or weaknesses for the child. Self-reported social standing may not be accurate, given the age of the child and the biases the child may have. Mpofu (2003) explored the discrepancy between perceived social status and actual social status, suggesting that perceived social status may be more important than actual social status in determining how individuals interact with their environment. However, data on actual peer social status demonstrated a link between social skills with peer social acceptance (Mpofu & Watkins, 1997). Most research assumes that social status and peer standing are indicators of social skills and social development.

Clinicians may be interested in peer relations in order to better understand the child's social environment, as well as to provide support for a diagnosis. For example, researchers have found that aggressive children are less preferred than nonaggressive children on sociometric measures (Cairns, Cairns, Neckerman, Gest, & Gariépy, 1988). Although it is difficult to pinpoint the causal relationship, children with lower peer acceptance were more likely to drop out of high school than those liked by their peers (Berndt, Hawkins, & Jiao, 1999). Peer relationships and social standing may also affect psychological symptomatology. In an investigation comparing children with and without close friends, Bagwell, Newcomb, and Bukowski (1998) found that not having friends and peer rejection were predictive of psychological symptoms, particularly depression, at a 12-year follow-up.

There are various methods to collect sociometric data, such as peer nomination, rating scales, and ranking. The peer nomination technique consists of tasks in which each child is

asked to nominate peers that most fit a specific target trait. For example, children could be asked to nominate those children who they most like to play with, who share the least, or who are the most helpful. In each case, the children can be instructed to limit the number of possible responses to one child, to list as many children who fit the description, or anything in between. For this task, children may use recall to list the children or draw from a list of names. For younger children, picture prompts may help children keep in mind their choices for the task as well as make the task more tangible. Landau and Milich (1990) used this technique in children as young as preschool age.

With prompts such as "who do you like the most" and "who do you like the least," one can generate a number of interpretive frameworks. The children who received many positive nominations and no or few negative nominations may be considered socially accepted, whereas those with the opposite combination of nominations may be considered socially rejected (Elksnin & Elksnin, 1997). Children who have many of both types of nominations may be highly visible in their classroom, whereas those with no or few nominations may be socially ignored or neglected (Terry, 2000). There are several classification systems (see Asher & Dodge, 1986; Coie et al., 1982; Worthen, Borg, & White, 1993).

Mpofu et al. (2006) pointed out that the classification any individual child receives from the peer nomination technique should be considered as part of, but not the entire, picture. Some children may have more friends outside of school than in their classroom, thus they may be rated as less popular than their social skills would indicate. Additionally, children who are new to the city or classroom may need more time to become familiar with the names or faces of other children when completing this type of task.

The rating scale technique is a task that requires each child to rate every other child in their classroom on the given target trait. The target measure can be similar to those in the peer nomination tasks, but instead of nominating particular children who fit that trait, children are asked to what degree (on a scale) an individual child has those characteristics. For example, each child rates from 0 to 10 how much he or she likes to play with each other child. Again, when younger children are involved, picture cues (e.g., smiling, neutral, and frowning faces) can be used to indicate how much they like each child.

As with peer nomination, a limitation of the rating scale technique is that those children who are new to the class or less well known may be rated lower than if they were more familiar (Bukowski, Sippola, Hoza, & Newcomb, 2000). Therefore, lower scores do not necessarily translate to being disliked.

The rating scale technique may be preferable to the peer nomination technique because it provides more complete data on the entire classroom of children, as every child rates every other child. As such, this tool can be used to obtain social acceptance data on all children within the given group. Researchers also suggest that the combination of rating scales with peer nomination techniques provides a more complete picture of social status than either method independently.

There are a series of ranking techniques, which are similar to peer nomination in that the rater must choose people who fit the given target characteristic. However, in peer rankings, the order in which the individuals are named should begin with the child most like the trait, then second most like the trait, and so on, until the end of the list where the child least like the trait should be placed. Oftentimes, the raters or "rankers" in this task are teachers. A full ranking procedure was described above, in which all children are rated for each target measure. One variation to the full ranking procedure is partial ranking, which is when only those children

who fit the description are to be rank-ordered (Merrell, 2003). Another ranking procedure is paired comparisons, in which each child is compared with each other child on a given trait. This method provides a very thorough account of each child's standing compared with their classmates and can be used to construct an understanding of social standing. Data obtained from sociometric ranking can generate the relative social position of a given individual (e.g., are they more or less popular than most other children in their classroom?) and show social networks at an individual level (e.g., Sally is friends with Paola, but not James), or classroom level.

Researchers have suggested that peer sociometric techniques should be combined with other assessment methods when constructing the social standing and relationships of a particular child (Bierman, 2004; Merrill, 2003). It may be difficult for clinicians to integrate peer sociometry assessment in clinical practice, as there are a number of challenges in obtaining the information. Getting access to the classroom and permission to obtain information about a specific child may be challenging, as well as potentially damaging to the child. Alternative options are garnering information through the parent or teacher as well as siblings and close friends of the child. As noted above, all sources may have some bias, but the information gained using techniques that assess social standing and skills may still be helpful in planning areas for intervention. Merrell (2001) recommended that the first stage of social skills assessment should be composed of direct observation and rating scales, and using peer sociometric techniques following those procedures to obtain more information if needed.

12.11 Virtual Reality Assessment

Virtual Reality (VR) technology has been recently incorporated into behavioral assessment protocols with children and adolescents. This technology has been used to enhance direct observation or role-play assessment. VR has been defined as a "three-dimensional interface that puts the interacting subject in a condition of active exchange with a world re-created via the computer" (Vincelli & Molinari, 1998, p. 67). This technology allows participants to feel fully present in this recreated environment by involving all of the sensorimotor channels and allowing for real-time navigation and interaction with the virtual environment (Riva, 1997; Vincelli & Molinari, 1998).

There are three types of VR systems: immersive VR, which utilizes head-mounted displays (HMDs), partially immersive VR, which involves a wide field-of-view display, such as a projection screen, and desk-top VR, which uses a desk-top monitor (McComas, Pivik, & Laflamme, 1998; Riva, 1998). Interaction occurs via joystick, keyboard, or a data glove, a glove with sensors that transmit spatial and tactile information to a computer, thus allowing users to manipulate and explore VR environments (Ku et al., 2003). Although the full immersion format may lead to an enhanced, all-encompassing experience for the user, this technology is much more expensive than the desktop version. In addition, some research on VR with adults has found that the use of HMDs causes symptoms of motion sickness in some subjects, resulting from a discrepancy between visual and vestibular inputs to the brain (Rose, Attree, & Johnson, 1996).

VR offers advantages over other assessment techniques. First, it allows for increased confidentiality. The assessment procedure can be limited to the therapist's office and devoid of human confederates, while still immersing the subject in a simulated situation that involves others (North, North, and Coble, 1998). In addition, the technology allows the therapist to

generate stimuli of greater perceived magnitude than may not be possible with in vivo or imaginal techniques (North et al., 1998). Furthermore, VR systems can simultaneously monitor diverse responses from the entire body and are sensitive to the properties of these responses, whereas other computer-based assessments can only accept one or two sources of input at one time (Riva, 1997). With respect to assessment, VR programs can alter what is presented auditorally, visually, olfactorially, etc., thus allowing for a flexible and multifaceted form of adaptive testing that is specifically tailored to the individual being tested (Riva, 1997). Finally, when compared with analog assessments that involve contact with a feared stimulus, the VR methodology provides an added measure of safety by limiting contact to a computer-generated simulation within an office or clinic (North et al., 1998). For example, if assessing a child with a dog phobia, the child's contact would be limited to a virtual rather than a real animal that could potentially harm the child. Because of its incipient status, the majority of systematic VR research has applied this technology to the assessment and treatment of adults, although some have commented on the potential application of VR to children (Muscott & Gifford, 1994; Rizzo, Wiederhold, & Buckwalter, 1998). The limited pilot data that have been conducted thus far on use of VR assessments with children have indicated that children find the technology usable and enjoyable (Rizzo et al., 2000).

Analog and VR assessment offer specific advantages over other assessment methods. They provide the therapist with the opportunity to observe behaviors that are difficult to assess via direct observation in natural settings, such as those that are highly situation-specific or occur infrequently (Hintze, Stoner, & Bull, 2000). This may be particularly relevant for children whose behaviors of interest occur at recess or on the school bus, where gaining access is difficult and their behaviors are likely to be influenced by the obvious presence of an adult observer. VR and analog assessment differ from other techniques, such as retrospective self-report or naturalistic observation, in that they provide the therapist with environmental control, which is relevant to successful functional analysis. By manipulating external stimuli, the assessor can test ideographic hypotheses about the behavior of interest. Specific aspects of the behaviors can then be linked to environmental factors that explain their etiology and maintenance, thus clarifying and simplifying case conceptualization. In addition, this information can speak to treatment planning by finding ways to create an environment that fosters healthy behaviors and extinguishes those that are unhealthy (Hintze et al., 2000).

12.12 Psychophysiological and Biological Assessment

While the use of psychophysiological assessment with children has lagged behind its use with adults, there has been substantial progress in the use and understanding of this assessment tool, creating the opportunity for clinicians to integrate psychophysiological assessment into their behavioral assessment practices. Psychophysiological assessment can be considered an expert competency, as it requires training and experience beyond that which is required for a clinician to practice. However, there are certain psychophysiological assessment techniques that may be integrated into behavioral assessment without extensive additional training. A unique advantage to psychophysiological assessment is that it is language-free, which provides an assessment tool that transcends culture, ethnicity, age, and disability. Psychophysiological assessment may be particularly useful with children, because children may be less aware of their emotional or cognitive processes and often lack the necessary language to describe such processes (Wilhelm,

Schneider, & Friedman, 2006). At this time, the impact of psychophysiological assessment in clinical work with children has been minimal, with the exception of its use in the assessment of sleep disturbance and pain (Roth, 1998). The purpose of this section is to provide clinicians with a brief overview of psychophysiological assessment with children (for a more detailed review, see Fox, Schmidt, Henderson, & Marshall, 2007) and how it can be integrated into child behavioral assessment.

If clinicians are interested in using psychophysiological assessment, it should be used in addition and subsequent to other assessment techniques (e.g., behavioral interviewing). It is likely that clinicians who are interested in integrating psychophysiological assessment into behavioral assessment will primarily choose to measure heart rate (HR), as it is easier than other psychophysiological indices to measure. There are HR monitors available that resemble wrist watches (e.g., Polar heart rate monitors) and are relatively easy to use. If a clinician were to conduct a behavioral interview and learn that the child is exhibiting fearful and anxious behavior, the clinician may want to measure HR, which has been suggested as the preferred cardiovascular index in the assessment of fearful and anxious behavior (Nietzel, Bernstein, and Russell, 1988). The clinician would use the behavioral interview to gain specific information about the child's anxious behavior, such as what the specific behaviors are, what precedes them, and how long they last. If the child's anxious behavior is in response to a specific stressor (e.g., spiders), it would be useful to assess the child's HR before, during, and after presenting the child with variations of the feared stimuli (e.g., a picture of a spider, a video of a spider, a live spider). The clinician could compare the child's reactivity to each of these stimuli in order to gauge the severity of the child's anxious behavior. The clinician may choose to proceed differently in the course of assessment and treatment planning if the child is exhibiting anxious behavior in response to live spiders only versus both live spiders and pictures of spiders, as the latter situation is likely to be more impairing. Research has demonstrated that HR is associated with anxious behaviors in childhood (e.g., Beidel, 1991; Ryan, 2004), thus a clinician could use HR measurement to help confirm or disconfirm a diagnosis of an anxiety disorder and to gain a more complete understanding of the presenting problem. It is important to acknowledge that there are other methods for measuring HR (e.g., electrocardiogram), but clinicians will likely prefer the ease of measuring HR using a wrist monitor.

There are other psychophysiological indices that could be clinically useful to assess, but they require more advanced equipment, training, and resources that may not be available to clinicians. Skin conductance is an electrodermal measure that has been implicated in autonomic nervous system activity and response to stress in children (El-Sheikh, 2007). A clinician could use skin conductance measurement in a similar manner as HR measurement, assessing a child's reactivity in response to specific stressors that were identified in the behavioral interview. Additionally, the hypothalamic-pituitary-adrenocortical (HPA) axis, an important part of the neuroendocrine system, has also been implicated in children's reaction to stress (Granger, Stansbury, & Henker, 1994; Kagan, Reznick, & Snidman, 1987) and has been associated with both internalizing and externalizing problems (El-Sheikh, Erath, Buckhalt, Granger, & Mize, 2008) as well as specific disorders such as Conduct Disorder (McBurnett et al., 1991) and Obsessive-Compulsive Disorder (Gustafsson, Gustafsson, Ivarsson, & Nelson, 2008) in children. HPA axis functioning can be reliably assessed by measuring cortisol level (Wilhelm et al., 2006). Although cortisol level can be measured by collecting a saliva or urine sample, which should not be particularly difficult to do in a clinical setting, it is unlikely that clinicians will be quick to integrate this into behavioral assessment, as it requires clinicians to find a local laboratory to

have the sample analyzed at, which entails additional time and financial resources. Furthermore, tools such as Positron Emission Tomography and functional Magnetic Resonance Imaging are available and can be used, for example, in the event that a clinician suspects a possible brain abnormality. However, it is unlikely that clinicians will routinely use these with children as they add additional time and resources and they might be seen as frightening to children.

There are various general concerns that must be kept in mind when considering psychophysiological assessment. First, baseline measurements taken in a clinical setting may not accurately reflect those taken outside of the laboratory. Second, the use of medication may have an effect on psychophysiology. If a child is taking a prescribed medication (e.g., Ritalin), it is useful to speak with the child's prescribing doctor to see if it is possible to discontinue the use of the medication on the day of the assessment. Finally, and perhaps most importantly, there is little normative psychophysiological data for children, making it challenging to use psychophysiological assessment to make meaningful diagnoses at this time (Wilhelm et al., 2006).

Psychophysiological research with children is progressing at a slower pace than with adults, in part, because the methods are more difficult to use with children. Additionally, more ethical justification is required to conduct this type of research with children. It is unlikely that clinicians will use psychophysiological assessment methods in practice if they are able to obtain sufficient assessment information using less complicated and invasive methods, but psychophysiological assessment has the potential to improve behavioral assessment by providing a more objective measure of the child's response to specific stressors. Overall, the use of psychophysiological assessment as a component in child behavioral assessment has conceptual promise, but it seems to have limited practical use at this time. Nonetheless, the substantial progress that has been made in psychophysiological assessment in recent years is making it easier for clinicians to use these technologies in clinical practice.

The growing number of studies on the biological assessment of mental disorders gives promise to the use of biological tools as another way to detect risk, predict the course, monitor, and treat disorders. As yet, many clinicians cannot make use of these new technologies. However, clinicians should be aware of the possibility of using biological testing to confirm or rule out disorders in children exhibiting certain problem behaviors. Currently, the most promising biological assessment research has occurred with disorders that are genetically based (e.g., Down syndrome) or caused by environmental events (e.g., brain damage). Genetic disorders can be associated with a variety of behavior problems, and in cases in which clinicians might think a genetic disorder may be the source of the presenting problem they should refer the child and family to the appropriate institutions. For example, Fragile X syndrome, a genetic disorder found on the X chromosome, has been linked to autistic and compulsive behaviors (Hall, Lightbody, & Reiss, 2008). Currently, genetic testing is used to rule out genetic conditions with autism-like symptoms (Volker & Lopata, 2008). Biological factors other than genes have also been implicated in autism, as Mulder et al. (2004) found elevated levels of blood platelet serotonin levels in individuals with this disorder. Conversely, decreased serotonergic activity has been found to be associated with impulsivity, aggression, and suicidal behavior (Brown & van Praag, 1991).

The brain is another frontier in studying the biological roles in mental disorders. Strakowski, Delbello, and Adler (2005) implicated prefrontal limbic structures as well as a trend of overactive amygdala response in both pediatric and adult bipolar disorder. Similarly, the same brain abnormalities associated with adults with schizophrenia have also been found in those with child-onset schizophrenia (Frazier, Giedd, Hamburger, & Albus, 1996). Although these assessment tools are not readily available to clinicians, all those who work closely with children should be aware of the possible biological causes of presenting problems and, when applicable,

create opportunities for the children with potentially biological-based problems to be explored more fully by geneticists and physicians.

12.13 Summary

Interest in child behavioral assessment has increased dramatically since Ollendick and Hersen (1984) published the first text devoted to this topic. This growth can be attributed to the burgeoning field of developmental psychopathology (Sroufe & Rutter, 1984), which emphasizes the importance of development in the expression of psychopathology in children and adolescents (Cicchetti & Rogosch, 2002). Child behavioral assessment was initially concerned with observable behaviors or potentially observable constructs, but has broadened to include beliefs, attitudes, and emotional states. The primary goal of behavioral assessment is to obtain information in order to determine the purpose, cause, or function of behavior. This allows for the creation of a functional analysis of the child's problem behaviors, which identifies the causes or reinforcers of the problem behaviors.

This chapter described and provided examples of the various behavioral assessment techniques that can be implemented in the behavioral assessment of children. The first group of assessment tools that were described (i.e., behavioral interviewing, structured and semi-structured interviewing, rating scales, assessment of cognitive constructs, direct observation, and motor, sensorimotor, language, and cognitive development) are basic competencies and all clinicians who work with children should be proficient in their use. The second group of assessment tools that were described (i.e., peer sociometry, virtual reality assessment, and psychophysiological and biological assessment) are more advanced techniques and require additional, specific training. For clinicians who conduct behavioral assessments with children, it is our hope that this chapter will help refresh what techniques are available for child behavioral assessment and what tools can be used in specific situations. We strongly recommend that interested readers seek additional information on the techniques explained in this chapter before incorporating them into their child behavioral assessment practices.

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Research

13 Psychometrics

Paul G. Michael · Susan T. Li

Abstract: Clinical psychologists must develop a specific set of competencies in the area of psychometrics and measurement theory in order to be successful professionals. The competency models put forth by professional organizations within psychology have provided the framework for identifying the broader foundational and functional competencies that pertain to the field of psychometrics, specifically assessment, and research and evaluation. As producers and consumers of research, clinical psychologists must have a firm understanding of measurement development and the ability to interpret and summarize information obtained from various types of assessment tools. Thus, the main focus of this chapter is to describe the application of psychometric concepts in clinical endeavors. Central to this discussion are psychometric concepts such as, scales of measurement, reliability and validity of psychological instruments, and approaches to test theory. Both basic and expert competencies in psychometrics are reviewed and discussed in the context of training professional psychologists at different levels of readiness (e.g., practicum, internship, licensure, etc.). However, it is noted that there are certainly areas in which there may be a difference of opinion as to what constitutes the core body of knowledge in psychometrics. Further, there is less consensus and literature on the definition of expert or master as compared to the articulation of basic competencies. Nonetheless, what is evident is the need to increase efforts to integrate psychology and new innovations occurring in the field of psychometrics. Additionally, as we prepare and train the next generation consideration should be given to developing ways to increase the number of psychologists entering the field of quantitative psychology.

13.1 Overview

What are the competencies, consistent with evidence-based practice, essential for professionals who refer to themselves as clinical psychologists? Specifically, what are the basic and expert competencies in the area of psychometrics that the clinical psychologists must develop over the course of their training and career that will make them successful?

In order to address the questions mentioned above, we will first provide a brief synopsis of the competency movement (and competency modeling) within the field of psychology. Next, we provide an overview of the field of psychometrics as well as a discussion of the core concepts found in this discipline. Then, we turn our attention to the identification of foundational competencies in the realm of psychometrics and measurement theory. Finally, the remainder of the chapter illustrates those competencies in the field of psychometrics that are required to be a successful clinical psychologist. This chapter speaks both the basic and expert competencies that would be fostered across the developmental lifespan of a competent clinical psychologist (i.e., doctoral training, internship training, postdoctoral education, licensure, and practice).

13.2 Competency Models

If one is competent, it is implied that he/she is qualified and capable of understanding and doing certain things in an appropriate manner. In professional psychology, the term competency further suggests that behaviors are carried out in a manner consistent with the ethical principles and standards of the profession, especially those that serve to protect and benefit the public (Rodolfa, Bent, Eisman, Nelson, Rehm, & Ritchie, 2005). Definitions of competence are abundant, and while it may seem trite to present a definition of competence in a handbook of clinical competencies, we do so only to serve as a basis for the discussion that follows. Mentkowski (as cited in Rubin et al., 2007) defined competencies as "complex interactive clusters of integrated knowledge of concepts and procedures; skills and abilities; behaviors and strategies; attitudes, beliefs, and values; dispositions and personal characteristics; self-perceptions; and motivations" (p. 453). This definition is comprehensive, and it also speaks about the key aspect of competencies; they are not simple stand-alone entities. Thus, while there may be general consensus on what constitutes the foundational and functional competencies within professional psychology, it is not a simple task to speak about only one competency domain without addressing its overlap with other areas. Further, when we identify the clusters of knowledge, skills, and abilities within the field of psychometrics, we must consider several of the competency domains within clinical psychology.

Over the past 20 years, the field of professional psychology has been making headway in the movement toward competency-based models (Peterson, Peterson, Abrams, & Stricker, 1997; Peterson, 2004; Rodolfa et al., 2005; Rubin et al., 2007). The American Psychological Association's (APA's) Task Force on Assessment of Competence in Professional Psychology and the National Council of Schools and Programs of Professional Psychology (NCSPP), with the aid of experts in the field, have focused their efforts on competency-based education, training, and credentialing (Kaslow, 2004; Kaslow et al., 2004). The APA's Ethical Principles and Code of Conduct (American Psychological Association, 2002), in conjunction with insights from authors and researchers, provide us with the critical domains of competency. The following framework reflects the latest work in the development of competency models within professional psychology. Both the cube model for competency development (Rodolfa et al.) and the NCSPP Competency Model of Education and Training (Peterson et al., 1997) contain functional competencies that consist of knowledge, skills, and attitudes essential to the practice of psychology. Additionally, the domains are not mutually exclusive, are interrelated, and occur at every stage of professional development (Rodolfa et al.). The six functional competencies from the cube model are assessment, diagnosis, and conceptualization; intervention; consultation; research and evaluation; supervision and teaching; and management and supervision (Rodolfa et al.). The seven competencies from the NCSPP model are relationship, assessment, intervention, diversity, research and evaluation, management and supervision, and consultation and education (Peterson et al.). As expected, there is a great deal of overlap between these two models. While many of the competencies are addressed throughout this text, for the purpose of this chapter, we will concentrate on only two functional competencies: assessment and research. Further, it is appropriate to draw attention to the scientific knowledge-methods foundational competency found in the cube model.

13.2.1 Assessment and Research Competencies

The scientific knowledge-methods foundational competency domain is critical to laying the groundwork for psychologists to subsequently acquire functional competency in assessment and research. Without a foundation in the scientific method, it would be impossible to develop the functional capacity to successfully conduct assessments and research. The foundational competency of scientific knowledge-methods is defined as "the ability to understand research, research methodology and a respect for scientifically derived knowledge, techniques of data collection and analysis, biological bases of behavior, cognitive-affective bases of behavior, and lifespan development" (Council of Credentialing Organizations in Professional Psychology, CCOPP, 2004, p. 11). The role of clinical psychologists as professionals not only includes the application of knowledge derived from scientific research, but rather is a form of science and research (Peterson et al., 1997). As such, professional psychologists must be able to design and critique approaches to systematic inquiry using qualitative and quantitative methods.

Clinical psychologists must be adept at the assessment and diagnosis of problems and issues associated with individuals, groups, and organizations (CCOPP, p. 11). According to the NCSPP educational model, assessment is defined as "an ongoing, interactive, and inclusive process that serves to describe, conceptualize, characterize, and predict relevant aspects of a client" (Peterson et al., p. 380). The definition further states that, "the assessment process uses a multimethod and multitheory approach…" (Peterson et al., p. 380). Training in psychological assessment requires more than simply learning to administer and score psychological tests; it must comprehensively include psychological measurement theory.

The research-evaluation functional competency domain has been defined as "the generation of research that contributes to the professional knowledge base and evaluates the effectiveness of various professional activities" (CCOPP, 2004, p. 11). This definition easily encompasses such research endeavors as developing measurement instruments and conducting validity studies. While many graduate students completing scholarly projects may find such research efforts to be daunting, it is within reason that practicing psychologists would attempt these types of studies.

Given the above descriptions of the assessment and research competency domains, the overlap with the field of psychometrics should be obvious. However, we will elaborate by first identifying the typical tasks performed by a psychometrician and then address specific knowledge areas as well as skills that contribute to becoming a competent assessor and researcher.

13.3 Psychometrics as a Discipline

To put it simply, psychometrics is the field of study concerned with the development and refinement of theoretical approaches to measurement and the construction of instruments and procedures for measurement. With regard to psychological measurement this may include, but is by no means limited to, the measurement of knowledge, abilities, attitudes, and personality traits.

Broadly speaking, the following represent the core subject matter one would need to scrutinize to further their understanding of this discipline: psychometric theory (e.g., classical test theory), measurement development, scaling procedures, measurement error, and the reliability and validity of measurement tools. It is important to note that there are a variety of statistical procedures one might utilize, and thus need to become proficient in, to assess the psychometric properties of measurement tools, including correlational analysis, regression analysis, structural equation modeling, item response theory (IRT) modeling, factor analysis, discriminant analysis, and analysis of categorical data. Statistical analyses pertinent to clinical competencies will be discussed elsewhere in this text; however, at times, it is difficult to separate the competencies one would develop in both disciplines, that is, statistics and psychometrics.

Coursework at the graduate level typically includes an introduction to the foundations of psychological measurement that covers the history of testing and assessment along with the exploration of the basic issues in psychological measurement, including reliability, validity, fairness, item analysis, and score reporting and interpretation. Emphasis is often placed on the interpretation, use, and evaluation of achievement, ability, attitude and personality measures. A critical analysis of the impact of testing on culture should also be a component of the program of study. Further, in many doctoral programs, students are expected to engage in the evaluation of existing and construction of new measurement instruments (e.g., attitude scales, performance measures, etc.). A course of this nature would focus on the planning, construction, administration, analysis, and validation of a test. Special emphasis would be placed on domain sampling, item writing, development of scoring protocols, differential item functioning, and reliability and validity studies. Many graduate programs also offer additional coursework on advanced topics in psychometrics. For example, the offerings may include a range of specialty topics designed to enhance the knowledge, skills, and abilities of students related to the technical developments in classical test theory, IRT and Rasch models, generalizability theory, models of selection bias, and test score estimation methods.

During internship training, clinical psychologists continue to apply their knowledge of theories underlying psychological tests and testing methods. Clinicians at this developmental level must be knowledgeable of the strengths and weaknesses of standard intellectual and personality measures (National Council of Schools and Programs of Professional Psychology, NCSPP, 2007). As they continue to hone their skills to administer and score measures, they begin the process of integrated interpretation under supervision. Further, these novice professionals must be aware of the methods of norming tests and implications for test usage with diverse populations. At the onset of postdoctoral training, professionals should have advanced knowledge of the strengths, weaknesses, and appropriateness of a broad range of psychological tests across a wide variety of individuals and populations (NCSPP). Over the course of their postdoctoral training, professional psychologists become increasingly autonomous as they demonstrate the capacity to choose, administer, score, and interpret tests, appropriate to the referral question (NCSPP).

In the United States, licensure in the field of psychology requires one to achieve a passing score on the Examination for Professional Practice in Psychology (EPPP). The EPPP assesses knowledge in a variety of areas that are required for the various responsibilities psychologists are expected to assume in professional practice. One area of the exam pertinent to our

discussion is assessment and diagnosis. Test takers are assessed on their knowledge of psychometric theory (e.g., classical test theory, IRT, etc.), generalizability theory, test construction and standardization procedures, reliability and validity of measures, examination of test fairness and bias, test and item characteristics, curve analysis, and the application of test standards (The Association of State and Provincial Psychology Boards, 2008). This exam serves as the final hurdle where one must demonstrate a certain level of competency before becoming a practicing professional.

Psychometricians, and similarly clinical psychologists, engage in the development of measurement theory and apply statistical theory and methods to collect, organize, interpret, and summarize numerical data to provide usable information with regard to measurement tools. The following embody the typical tasks of both novice and expert psychometricians. It is often the case that one must process large amounts of data for statistical modeling using computer software. Additionally, one will report results of statistical analyses, including information in the form of graphs, charts, and tables. Those engaging in research are tasked with identifying relationships and trends in data, as well as any factors that could affect the results. It is a common practice to analyze and interpret statistical data to identify significant differences in relationships among sources of information (e.g., the multi-trait multi-method matrix). Psychometricians must further evaluate the statistical methods and procedures used to obtain data to ensure validity, applicability, and accuracy. Additionally, they evaluate sources of information to determine any limitations in terms of reliability or usability. In order to complete the aforementioned tasks successfully, one must acquire a broad knowledge base as well as develop a plethora of basic and advanced skills. While this chapter is not intended to be a psychometrics text, in an effort to help guide the discussion of psychometric competencies, we will provide a review of the central topics in the field of psychometrics as they relate to core competencies of professional psychologists. Later, we will review these concepts in an illustrative capacity to suggest what should be learned and exhibited at different stages of training and practice.

13.3.1 Psychometric Concepts and Related Competencies

Those who engage in measurement development or simply use measurement devices must be knowledgeable about the science of measurement. Measurement consists of rules for assigning symbols to objects so as to represent quantities of attributes numerically or to define whether objects fall in the same or different categories with respect to a given attribute (Nunnally & Bernstein, 1994). Requisite measurement concepts include levels of measurement and standardization. At the undergraduate level, psychology students learn and become familiar with the four standard levels of measurement: nominal, ordinal, interval, and ratio. Graduate students are further trained on the use of measurement scales and learn that the number of permissible statistics one may utilize to analyze data is dependent upon the level of measurement. For example, one may be restricted to nonparametric tests when constructs are measured using only nominal scales. When clinical psychologists use measurement tools they must be able to interpret diagnostic information, taking into account the scale of measurement employed. It is important to be mindful of how the level of measurement might restrict the information collected and subsequently impact interpretation.

Standardization allows us to apply specific rules (usually involving norms from a population of interest) to measure attributes. When a measure is standardized, scientists are provided with a more efficient way to communicate and compare results. Additionally, standardized measures provide a certain level of objectivity and quantification. Numerical results provided by standardized measures permit the use of more powerful methods of statistical analysis (e.g., parametric tests). For example, basic to any standardized test is the ability to apply descriptive statistics, including those characterizing the normal curve (e.g., skewness and kurtosis), measures of central tendency (e.g., mean, median, and mode), and measures of variation (e.g., variance and standard deviation). Psychologists in training and practicing professionals alike must be knowledgeable of standard scores (e.g., z-scores, t scores, stanine scores, etc.) so that they are able to apply these concepts when interpreting an individual's score and make comparisons to the normative data typically found in test manuals.

Another central topic in psychometrics, and in particular test construction, is scaling. Scaling is the assignment of objects to numbers according to a rule (Stevens, 1946), and in many instances, the objects are text statements – usually statements of attitudes or beliefs. Scaling is often used to test a hypothesis and is conducted as part of exploratory research. For example, we might want to know whether the construct or concept is one-dimensional or multi-dimensional and we are interested in what dimensions underlie a set of ratings. The most common reason for employing scaling procedures is for scoring purposes. When a participant gives their responses to a set of items, we often would like to assign a single number that represents that person's overall attitude or belief. It is advantageous for both graduate students and practicing professionals to be familiar with and understand various scaling methods that may be used to select items.

Among scaling procedures, there is a collection referred to as stimulus-centered, with the classical method for development being the Thurstone approach. Other types include the Q-sort method and rank-order methods (e.g., paired comparison method). A second set of scaling methods, somewhat more popular in clinical psychology research, is the subject-centered scaling technique. The typical procedure for developing these scales is the Likert method, and an alternative is the semantic differential. Recently, there have been developments in scale construction methods that assign scale scores to both subjects and stimuli (e.g., IRT and the Rasch model). It must be stated that test development is not only a time consuming and laborious research endeavor, but also one that requires, in order to produce tools of high quality, a great deal of expertise in a number of areas related to psychometrics. Therefore, test development should only be taken on by someone with an expert level of competency in the above-mentioned areas as well as in the areas discussed below.

There will likely be some error involved in measurement no matter what the scaling method, level of measurement, or psychological construct being assessed. There are several classical theories of measurement error, some of which assume that the objects of measurement (e.g., people) have true scores on the attribute being measured (Nunnally & Bernstein, 1994). Students of psychometrics need to have a firm grasp on the concept of measurement error, and specifically the standard error of measurement.

Classical test theory is a body of related psychometric theory based on the breaking down of a person's observed score that is obtained on a test into a true score component, that is free from error, and an error component. Measurement error, in this sense, may come from internal (e.g., the person) and external (e.g., testing conditions) factors that are extraneous to the construct being measured and affect the observed score. Generally speaking, the aim of classical

test theory is to understand and improve the reliability of psychological tests. Classical test theory is a special case of generalizability theory in that classical test theory only takes one source of error into account at a time, whereas generalizability theory can take many concurrent sources into account. Developments in analysis of variance approaches to classical test theory, like the intraclass correlation, have allowed psychometricians to look at more than one source of variance simultaneously. The term "classical" is typically linked to those measures that are scored using the linear combinations of responses to individual items and is in contrast to the more recent psychometric theories, generally referred to collectively as IRT, where scoring tests are based upon the pattern of item responses (Nunnally & Bernstein, 1994). Knowledge of the fundamentals of IRT must be acquired in order to be considered an expert in psychometrics.

In psychometrics, IRT involves the application of mathematical models to data from questionnaires and tests as a basis for measuring abilities, attitudes, or other variables. Typically, IRT research involves abilities, and the attribute central to the research effort is some form of skill. While complex mathematics are employed, at its most basic level, IRT is based on the idea that the probability of getting an item correct is a function of a latent trait or ability (Nunnally & Bernstein, 1994). Hence, it is often referred to as latent trait theory. IRT assumes that there is a correlation between the score obtained by a person for one item and their overall ability on the latent trait which underlies test performance. The simplest IRT model is the one-parameter (Rasch) model in which items are assumed to vary only with respect to their difficulty. IRT can be used to create a unique plot for each test item (e.g., Item Characteristic Curve, ICC). The ICC is a plot of probability that the item will be answered correctly against ability, keeping in mind that the questions cannot be answered correctly by guessing. No matter which theoretical model of measurement error is being utilized, test developers and researchers must demonstrate that measurement instruments are reliable. Without reliability of measurement, research results are not replicable (which is fundamental to the scientific method).

Reliability refers to the consistency of a measure's items or the dependability of a measure over time. Since identifying a person's "true" score on a measure is conceptually theoretical, reliability must be estimated. As mentioned above, observed scores for a person on a given measure consist of both that person's true score as well as the error inherent in the measurement of a psychological construct. Thus, the larger the amount of measurement error present, the weaker the reliability estimates will be. It is important to understand that measurement error can be a mixture of both systematic and random processes; however, according to classical test theory, the error component of one's observed score is attributed to random error. Systematic error should be dealt with by researchers when considering the research design and methodology (e.g., random assignment). In other words, investigators should pay special attention to ways in which they might limit the opportunity for systematic measurement error to occur.

There are four ways in which reliability estimates are determined: (i) Internal consistency reliability produces a reliability estimate based on the correlation (interrelationships) among the test items comprising a set (e.g., Cronbach's alpha). (ii) Split-half reliability estimates reliability based on the correlation of two equivalent forms of the scale. It should be noted, however, there are specific criteria that must be met in order to have "equivalency" among forms (e.g., identical means and standard deviations). (iii) Test–retest reliability produces an estimate based on the correlation between two (or more) administrations of the same instrument at different points in time. (iv) Inter-rater reliability consists of estimation based on the correlation of scores between or among two or more raters who rate the same item, scale, or instrument.

These four reliability estimation methods are not necessarily mutually exclusive. All reliability coefficients are forms of correlation coefficients, but there are multiple types representing different meanings of reliability, and more than one might be used in single research setting. In order to be truly competent, it is vital that psychologists at all levels of training are comfortable computing as well as interpreting reliability estimates.

Many authors have provided guidelines for interpreting reliability estimates. For example, Nunnally and Bernstein (1994) suggest that for basic research purposes 0.70 is a sufficient reliability estimate, and it may not be worth the time and resources to attempt to increase the number of items and reduce error in other ways such that the estimate would exceed 0.80. That being said, a satisfactory level of reliability is truly dependent upon how a measure is being used. Some authors have suggested an estimate of 0.85 or higher when scores are used to make clinical decisions (Rosenthal & Rosnow, 1991; Weiner & Stewart, 1984). It seems reasonable to conclude that when clinical psychologists use assessment tools, important decisions will be made with respect to a client's score, thus "…a reliability of .90 is the bare minimum, and a reliability of .95 should be considered the desirable standard" (Nunnally & Bernstein, p. 265). It is important to note that these "guidelines" that psychologists may employ to interpret internal consistency reliability estimates have been met with some criticism. In particular, Streiner (2003) believes that Nunnally and Bernstein may have set high a criterion for alpha when assessing the internal consistency reliability of clinical scales. Streiner's comment stems from the fact that many clinical scales are intended to tap into a unidimensional construct; however, the construct may be conceptualized as having many different aspects (i.e., components or subscales). Thus, if alpha is too high (i.e., over 0.90), this may represent redundancy across items rather than homogeneity.

It is often stated, and truthfully so, that reliability is a necessary but not sufficient condition for validity. In other words, measures may be reliable without being valid; however, they cannot be valid without being reliable. Technically speaking, it is not the measurement tool itself that is valid, but rather it is the inferences (or interpretations) that we make from that tool that require evidence of validity. Validity refers to "truthfulness," and a measurement instrument is said to be valid if it measures what it purports to measure. The classic approach to validity consists of addressing a measures content, criterion, and construct validity. At a very basic level, a measure may be said to have good "face" validity if the instrument appears to be a credible and plausible measure of the construct. Professionals in training often confuse this concept with content validity. Face validity is the least important kind of validity since, unlike content validity, it is retrospective rather than prospective and some measures (e.g., The Minnesota Multiphasic Personality Inventory) have low face validity but good criterion validity. Content validity addresses whether a measure adequately samples the content in the domain of interest. Content validity is usually assessed by the inspection of the content of the items for relevance to the construct of interest by subject matter experts. Additionally, one may ensure a tool has adequate content validity when a specific theory is used for scale development or a systematic planning tool is utilized to outline the content of a test. Criterion-related validity speaks of establishing a statistical relationship between a measure and some relevant behavioral outcome that is external to the measuring instrument. There are two common types of criterion-related validity studies, concurrent and predictive. The difference between these two strategies simply boils down to when data on the criterion variable are collected. Construct validity is a bit more difficult to define, as there tends to be a certain level of disagreement among scholars. Cronbach and Meehl (1955), who wrote the seminal article on the topic, state that "construct validation

is involved whenever a test is to be interpreted as a measure of some attribute or quality which is not operationally defined" (p. 284). There is consensus, however, on the steps involved in construct validation. First, the theoretical relationships among the concepts involved must be identified. Then, the hypothesized observed relationships among the measures and concepts are specified. Finally, the empirical results are interpreted to determine the consistency of the findings with the hypothesized relations in the first two steps. Construct validity is demonstrated by investigating convergent and discriminant validity of scales. Convergent validity refers to whether the scale correlates with other scales that it should be related to, while discriminant validity refers to whether the scale does not correlate with other scales that it should not be related to. Traditionally, the multi-trait–multi-method matrix was utilized to assess these relationships (see Campbell & Fiske, 1959). More recently, these validation procedures are conducted by using exploratory and more specifically confirmatory factor analyses.

Factor analysis is both a theoretical and data reduction tool. Theoretically, it helps us to understand the latent constructs underlying observed measures. It also provides a method by which we can reduce large amounts of data to smaller sets that still capture most of the same information. In this fashion, it is commonly employed in the process of test development. Further, it can be used as a validation tool to the extent that one has clear theoretical hypotheses and a measure that purports to match those hypotheses. This is especially true when confirmatory factor analysis is used. At a basic level of competence, one must demonstrate an understanding of the basic concepts related to factor analysis and be able to evaluate research utilizing this statistical technique. To exhibit a more expert level of competence, clinical psychologists would be expected to perform and interpret the results from these procedures. In order to be proficient in factor analysis, professionals must first learn how to assess the appropriateness of the data, specifically the correlation matrix. For example, there are a series of tests that may be conducted to determine if the items of a measurement tool are related (e.g., Bartlett's test of sphericity, Kaiser–Meyer–Olkin measure of sampling adequacy, etc.). Without a suitable correlation matrix, it would be difficult to determine if there is a latent construct underlying the items. Furthermore, if one expects to be an expert with regard to factor analysis, concepts such as a "Heywood" case, eigenvalue, and communality must be well understood. When conducting a factor analysis, one is presented with many options with regard to factor extraction techniques (e.g., principal components, principal factor, maximum likelihood, etc.). A qualified individual would be well versed in each of these methods and their intended impact on the estimates of communality (i.e., part of a variable's variance that is common to the factors extracted). One must also make a decision with regard to rotation (i.e., orthogonal vs. oblique rotation), and thus must be cognizant of how each would treat the factor scores. A clinical psychologist who is proficient in factor analysis would also be well aware of the problems that may arise when trying to determine the number of factors that are extracted in a given analysis. The professional has many tools at their disposal to properly identify the number of factors, including the eigenvalue-greater-than-one rule, the scree test, significance tests, the minimum average partial (MAP), and parallel analysis. An authority on factor analysis would be able to aptly utilize these methods so as not to under- or over-extract the estimated number of factors. It should also be pointed out that there are a number of other statistical procedures related to factor analysis that clinical psychologists should be knowledgeable about including, cluster analysis, profile analysis, and multidimensional scaling.

Psychologists at all levels of training and those practicing professionals should be able to demonstrate some level of competence with regard to the psychometric concepts discussed

above. In the following section, we will further illustrate how these psychometric concepts and competencies are connected to the practice of clinical assessment.

13.4 Psychometric Concepts and Clinical Endeavors

In the practice of clinical psychology, the most basic level of competency involves an ability to understand and apply learned concepts. In this section, we link concepts defined and described in earlier sections to application of psychometric concepts in clinical endeavors.

After learning about probability, reliability, and the normal curve in entry-level statistics and psychometrics classes, most students have little recognition of how these fundamental concepts will ever be applicable to clinical work. Coursework in assessment begins to change those perceptions, and clinical practica often make the most impact in generating an "A-HA" experience for the novice clinician.

Clinical application is best illustrated by examples and vignettes. Therefore, we offer the following scenario as starting place to aid in the illustration of psychometric competency.

Michelle is a 16½-year-old biracial (Caucasian and Native American) female who was diagnosed with phenylketonuria (PKU) at birth. Michelle's primary care and psychological services are coordinated through an inter-professional clinic in the Pacific Northwest. This month, Michelle will be evaluated by a practicum student, Donna, who is just beginning her first external training experience (outside the university training clinic) at St. Paul's Hospital. Is Donna competent to evaluate Michelle? Does she have the basic level of knowledge, skills, and abilities to perform effectively with supervision? What does Donna need to know to demonstrate basic competency in the area of psychometrics at a novice level?

13.4.1 Probability and the Normal Curve

Donna is a diligent student and although this is her first case with PKU, she does her homework and learns that PKU occurs in 1 in 15,000 births with varying estimates across ethnic groups (National Institutes of Health [NIH] Consensus Development Panel, 2001; Sullivan & Chang, 1999) – probability revisited! An understanding of probability theory is critical for determining the "likelihood" of a particular event. Diagnosis and assessment are predicated on the assumption that individuals with disorders deviate from the norm, and thus, atypically is an essential defining feature. Atypicality is often determined using odds ratios and/or standardized measures. In this case, PKU is not a common event and unless Donna continues to work in specialty clinics, her chance of encountering clients with this disorder in a typical outpatient setting is low.

We noted previously that basic competency in regards to the normal distribution involved understanding the nature of the distribution and assumptions of normality. What does this mean in clinical practice? In combination with probability theory, the normal distribution challenges users of psychological instruments to think critically as to what they truly mean by 'unlikely to have occurred by chance' and how confident they are that their client's findings deviate from the normal range. Specifically, what defines aberration from the norm? If Michelle's test scores fall within the middle range (±1 standard deviation), will Donna be concerned? At what point on the continuum from one to three standard deviations below the mean does

functional impairment in a specific skill appear? Obviously, there is not a one-to-one correspondence between behavior and test scores; however, all too often, an incomplete under-standing of the continuous nature of the normal distribution leads to a knee-jerk response of over or under-interpretation and subsequent inappropriate diagnosis.

Furthermore, normality is assumed for particular psychological constructs in assessment, but not for others. We assume that general cognitive intelligence is normally distributed with many individuals clustering around the average and few individuals scoring at the extremes. This means that Michelle would be most likely to have average intellectual functioning; however, her diagnosis of PKU is expected to result in a lowered cognitive score. Conversely, characteristics such as polysubstance abuse or suicidality are expected to be relatively uncom-mon in the general population, and thus, to be positively skewed rather than normally distrib-uted. Most individuals will not endorse these characteristics while a few individuals will endorse high levels of these risky behaviors. In contrast to both of these traits, the expected underlying distribution for gross motor skills is less apparent. This might be an example of a truncated distribution in which little meaningful variability is found at the upper end of the distribution. The inability to walk at age 3 is clinically significant and indicates gross motor skills that fall well below the mean (or the lower tail of the distribution). However, what inter-pretation is made for the upper tail of the distribution? Is there much clinical utility in making interpretations of superior walking performance? In practice, most individuals learn to walk, and little inference is made beyond typical skills.

13.4.2 Scaling and Measurement

Students are particularly boggled by score transformations and comparing scores across vari-ous scaling metrics. It is difficult for the novice examiner to keep in mind that a score of 100 (IQ or standard score), 50th (percentile), 10 (scaled score), and a 0 (z-score), all indicate aver-age performance. However, it is extremely important that professionals are sufficiently grounded in score transformation, scaling, and various distributions to be able to translate scores into a single system for view by others, and to be able to explain scores in language that lay individuals can understand. In Michelle's case, Donna needs to be able to explain to her and her caregivers the meaning of her scores relative to the general population and to her own areas of strength and weakness.

13.4.3 Central Tendency, Variability and the Standard Error

All scores vary within an individual, across individuals, and over time. Furthermore, scores will tend to cluster together around a central common value. The extent of variability is deter-mined by many factors including characteristics of the given construct. It is valuable for novice examiners to understand distinctions between measures of central tendency such as the mean, median, and mode. The median and mode are rarely used in assessment practice, whereas, the mean is the most heavily relied upon measure of central tendency. At a basic level, users must keep in mind that the mean is affected by extreme scores. Questions involving the mean may take several forms. Is the full scale IQ a good indicator of the individual's general intelligence? If extreme scores are present among the indexes, is the overall aggregate score misleading? Is it

reasonable to make idiographic interpretations of single subtest scores, or is it more appropriate to base conclusions on an aggregate score that synthesizes information from a variety of smaller samples of behavior? The answers to these questions continue to be debated (see the special issue of *Applied Neuropsychology*, Reynolds, 2007). However, it is still necessary to understand the underlying psychometric concepts in order to arrive at a justifiable conclusion. Related to this issue is interpretation of profile strengths and weaknesses. Which mean should be used for determining strengths and weaknesses (i.e., a global mean based on ten subtests or a specific index mean of three subtests)? How is the determination of the amount of clinically meaningful intersubtest scatter influenced by the number of subtests being aggregated? The interpretation of intersubtest scatter is linked both to the concepts of central tendency and variability. How much should ten subtests vary from one another particularly when the subtests tap different underlying constructs? What about the variability of three subtests? The degree of variability is directly related to the number of inputs being compared and the homogeneity of the constructs the inputs reflect.

Finally, we address the importance of the standard error in assessment. As noted previously, the standard error is the standard deviation of the sampling distribution of the mean. The notion of a standard error, coupled with the central limit theorem, is a difficult concept for most students to fully integrate. Most novice students internalize and memorize a mantra that goes something like, "big standard error is bad." While this is often true, students place less attention on understanding the factors that affect the size of the standard error and what information it conveys. The application of the understanding of the standard error is most directly seen in the formation/calculation of a confidence interval around a score for reporting purposes. Does the student truly understand the purpose and interpretation of the confidence interval? Does he or she recognize that the standard error provided in the manual is derived from the normative sample and if that sample was not sufficiently large then the standard error will likely be inaccurate? Does the student notice that the standard errors for some subtests are much larger indicating greater variability for some subtests than others? Observation of this information should influence the degree to which a finding on a subtest is interpreted idiographically rather than ignored in favor of interpreting only aggregate findings. It is noteworthy that Koocher (1993) identifies failure to understand the standard error of measurement as a common ethical issue that arises in the practice of psychological assessment further underscoring the need for competence related to this psychometric concept.

13.4.4 Regression to the Mean, Reliability, Floor and Ceiling Effects

Re-evaluation of an individual for a variety of purposes is a common recommendation by psychological professionals. This practice must be conducted on a foundation of psychometric competency or errors in interpretation will result. Several concepts are relevant, including regression to the mean, test–retest reliability, and the standard error. Regression to the mean is a statistical concept that must be well understood when a test is repeated. In our example client's case, Michelle is being re-evaluated to determine whether or not cognitive decline has occurred since the last evaluation. When individuals with PKU are compliant with dietary restrictions and eliminate phenylalanine from their food intake, they are able to reduce the likelihood of neurocognitive impairment associated with elevated levels of phenylalanine

(hyperphenylalanine) in the bloodstream. However, dietary compliance is a major issue for adolescents with PKU (Gleason, Michals, Matalon, Langenberg, & Kamath, 1992; Ievers-Landis, Hoff, Brez, Cancilliere, McConnell, & Kerr, 2005). In this clinical scenario, re-evaluation entails examining previous scores on an intelligence test such as The Wechsler Intelligence Test for Children – Fourth Edition (WISC-IV; Wechsler, 2003) relative to current scores. The Wechsler tests have been and continue to be some of the most widely taught and used cognitive tests (Piotrowski & Keller, 1992) in psychology. If Michelle's full scale IQ score on the WISC-IV drops from 107 to 99, is this evidence of decline? Extreme scores for the person will regress to their mean with repeated administration. Depending on the standard error, a drop of eight points may be within the confidence interval and does not represent true change. Furthermore, a score on an unreliable scale that has low test–retest reliability would be expected to change from time 1 to time 2 even if there is no true change in the underlying trait. With multiple administrations of the intelligence measure or with many tests being administered, there is a possibility of detecting a change in scores solely by chance. Alpha inflation as a construct is rarely considered during the process of assessment; however, a type I error (i.e., we say there is a significant effect when in fact there is not) is increased with multiple tests. For example, comparing all WISC-IV indexes in a pairwise fashion (e.g., perceptual organization [POI] vs. processing speed [PSI]) as is recommended on the WISC-IV protocol without any correction for type I error is likely to result in a significant difference purely by chance. For this reason, the use of a more conservative p-value/significance level such as 0.01 as opposed to 0.05 may be preferred.

Another psychometric concept to consider in Michelle's evaluation is floor and ceiling effects. The WISC-IV is normed for children and adolescents ages 6 years 0 months to 16 years 11 months. The age range of this test is unlikely to be a problem for Michelle even though she is at the upper end of the test norms, because cognitive impairment is a common symptom of PKU when diet is not well managed (Fishler, Azen, Henderson, Friedman, & Koch, 1987; Gassio et al., 2005; Griffiths, Paterson, & Harvie, 1995; NIH, 2000). Taking into account floor and ceiling effects, it is more important that there is greater variability at the lower end of the test in this client's particular case than variability at the upper range. Were the referral question to be related to giftedness, this test might present a different concern.

13.4.5 Validity

Construct validity in assessment is an ever-evolving question when tests are constantly being revised and redesigned. The rate at which tests are re-normed and re-published has quickened as evidenced by a period of 26 years from the introduction of the Wechsler Adult Intelligence Scale (WAIS) in 1955 (Wechsler, 1955) to its revision as the WAIS-R (WAIS-R, Wechsler, 1981), 16 years from the WAIS-R to the WAIS-III (Wechsler, 1997) as compared to 11 years between the WAIS-III and the WAIS-IV (Wechsler, 2008). The WISC has followed a similar trajectory (1949 WISC; 1974 WISC-R; 1991, WISC-III; 2003, WISC-IV). Each time a test is re-introduced, the validity of any revised subtests must be established. For example, there is evidence that matrix reasoning, a relatively newer subtest on the Wechsler tests, is verbally mediated although it is designed to be a measure of nonverbal fluid reasoning (Dugbartey, Sanchez, Rosenbaum, Mahurin, Mark Davis, & Townes, 1999). Thus, research is needed to establish the construct validity of newly developed scales as well as slight modifications to existing scales that are

made in the revision process. For example, in the 2008 revision of the WAIS-IV, the similarities, comprehension, information, and vocabulary subtests all have items which have been replaced as well as revised scoring rules. Another influence to consider is the Flynn effect (Kanaya, Scullin, & Ceci, 2003) which is a phenomenon in which intelligence scores tend to increase over time after a test is released. Once a test is re-normed, scores are reset to the standard mean of 100.

Let us assume for our discussion that 2 years have passed and our client, Michelle, has turned 18 and is being moved from the child and adolescent clinic to the adult clinic for continued follow-up. Although it was routine practice in the child clinic to evaluate patients with the WISC-IV, the D-KEFS (Delis-Kaplan Executive Functioning System, Delis, Kaplan, & Kramer, 2001), and the WIAT-II (Wechsler Individual Achievement Test – Second edition, Wechsler, 2001), the adult clinic has adopted a battery that includes the WAIS-IV, the DKEFS, and the WJ-III NU (Woodcock–Johnson Tests of Achievement – Third Edition, Norm Update [WJ-III NU], Woodcock, McGrew, & Mather, 2006). What is the expected relationship between Michelle's scores on the WISC-IV and the WAIS-IV, two measures of cognitive ability normed on different aged populations? There are many factors which will affect Michelle's WAIS-IV scores including new subtests on the newly released WAIS-IV with yet to be established validity (e.g., visual puzzles), statistical artifacts such as regression to the mean, and the Flynn effect which will likely result in a decreased score on the WAIS-IV relative to a prior version of the WAIS (i.e., the WAIS-III) or the WISC-IV.

13.4.6 Multi-trait Multi-method – Convergent and Discriminant Validity

We return to our clinical example, to extend its complexity to aid us in illustrating yet more psychometric concepts important to the assessment endeavor. We have discussed some of the issues related to Michelle's cognitive/intellectual functioning. However, although Michelle has exhibited longstanding problems with attention and concentration, she was never formally diagnosed with Attention-Deficit Hyperactivity Disorder (ADHD) in addition to her PKU diagnosis. Attentional problems are often present in individuals with PKU as a result of exposure to high levels of phenylalanine (Antshel & Waisbren, 2003; Channon, German, Cassina, & Lee, 2004). Recently, Michelle has self-reported problems that she believes are impacting her performance at work. Further investigation and evaluation is needed to determine if Michelle meets criteria for an additional diagnosis, and if she is eligible for work place accommodations. Because there is no single measure that includes a set of tasks specifically designed to address attention and concentration, the competent assessor is looking for convergent findings on a variety of subscales and individual tests that tap this domain. We are reminded of the need to understand validity. What information from various administered tests should be expected to hang together and what information should not be related?

We can utilize the psychometric concept of the multi-trait multi-method matrix as a foundation for how to view data obtained across measures. We are expecting Michelle's scores on various attention and concentration tasks to be similar. However, we need to recognize that when two tests measure attention in the same way, the scores will be more similar than when two tests measure attention in different ways. Thus, an example of a mono-trait mono-method relationship would be Michelle's performance on two cancellation tasks, in which the same skill is being tapped in the same way by two tests. In contrast, mono-trait hetero-method

would apply to her performance on a cancellation task and a continuous performance task in which one is a paper–pencil measure and the other is computer administered. Multi-method must also be distinguished from multi-source data in which we are looking for information from various sources or reporters. Attention problems as reported by Michelle and her employer on a questionnaire measure with similar items worded differently depending on the person completing the measure would be an example of multi-source data. If we find evidence of convergence across measures of the same trait using different methods, we can be more confident that we have arrived at an accurate diagnosis. This is a more stringent requirement than if only one test must meet significance or if we only use tests that evaluate the trait in the exact way. Conversely, there is a greater burden placed on the examiner to truly understand how to make sense of results that are not in agreement. The literature is replete with examples of low agreement between raters of a given trait (e.g., see a classic article by Achenbach, McConaughy, & Howell, 1987). It is incumbent upon the examiner to evaluate the evidence, taking into account psychometric theory, to arrive at an accurate conclusion rather than assuming that an individual does not meet criteria for a disorder because not all scores or raters are in agreement.

13.5 Basic Competencies in Psychometrics

13.5.1 Assessment Competency – Readiness for Practicum

Basic psychometric competency involves the ability to read and understand psychometric data as presented in test manuals, computer generated reports, and the research literature. Understanding scaled scores, base rates, and intersubtest scatter; calculating discrepancies and interpreting scores; and evaluating reliability and validity of standardized measures are all general assessment skills required for competency. As noted, a key skill of the educated clinician is the ability to read psychometric information and decipher it. New tests are always being developed. Foundational core knowledge should be sufficient such that when new tests are released, the individual is able to pick up a new test manual and decipher it.

　　There is widespread agreement that an understanding of basic psychometrics is required for competency in assessment. Krishnamurthy et al. (2004) identified eight core competencies for psychological assessment with the first one being a background in psychometric theory. These authors were part of a working group charged with identifying the core components of psychological assessment competency. The American Psychological Association's *Guidelines for Test User Qualifications* (Turner, DeMers, Fox, & Reed, 2001) recommends core knowledge in psychometrics and measurement. Within this domain, required topics include descriptive statistics, reliability and measurement error, validity and the meaning of test scores, normative interpretation of test scores, and selection of appropriate tests (pp. 1100–1101). The recent *Standards for Education and Training in Psychological Assessment* by the Board of Trustees of the Society for Personality Assessment (Society for Personality Assessment, 2006) recommends as minimal requirements for competence in assessment, didactic instruction and practical experience in "psychometric theory, including issues of reliability, validity, reference group norms, limits of generalizability, and test construction" (p. 356). In a survey conducted by Ryan and Sackett (1992) regarding competency for individual assessors, 69.1% of those surveyed endorsed psychometrics as a necessary area of training.

Exactly how much psychometric proficiency is needed for competency, the particular topics that should be taught, and the best way to teach psychometric concepts is an issue for debate. Childs and Eyde (2002) surveyed accredited clinical psychology doctoral programs to determine what programs teach and how various topics are taught within each program. Of the programs surveyed, 73% had at least one course that covered the topic of psychometrics and 24% had at least one course that focused on the topic of psychometrics (a focus was defined as devoting at least half of a course to the topic). In terms of required content, 65% of programs required a course in which psychometrics was covered as a topic and 17.9% required a class which focused on psychometrics. The psychometric topics being taught, including the percentages of programs stating that the topic was covered, were: validity 63%, reliability 60%, test development 43%, norming 20%, test/item bias 15%, classical test theory 15%, IRT 5%, and standard setting 5%. These percentages illustrate the relatively greater importance placed on understanding validity and reliability relative to topics such as IRT.

Psychometric concepts currently being taught in graduate programs and topics in psychometrics considered to be important for competency are both similar and different. In 1999, an APA division 12 task force, titled Assessment for the 21st Century (APA Presidential Task Force, 1999), was formed and charged with creating a curriculum model for graduate programs for teaching psychological assessment. The task force convened a group of psychologists considered to be, "eminent in various assessment fields" (p. 10), and this working group generated a list of recommended topics. Of the topics that emerged as being foundational for assessment, construct validity had the highest rating. Other areas of psychometrics and statistics considered to be important for competency included reliability, standard error of measurement, Bayes theorem, clinical versus statistical prediction, and an understanding of base rates.

Topics associated with assessment and psychometrics are often taught in conjunction with psychometrics when relevant. According to Childs and Eyde (2002), psychological assessment "requires an understanding of psychometric concepts, such as reliability and validity, and of other issues, such as professional ethics, legal issues, and assessment of diverse populations" (p. 131). The ethical standards pertaining to assessment and addressing psychometrics are mostly found in standards 9.01 to 9.11 of the American Psychological Association's Ethical Principals for Psychologists (APA, 2002). Quality and fairness in assessment of diverse populations is addressed in the Educational Testing Service's Standards (ETS, 2002) which is based upon the Standards for Educational and Psychological Testing developed by the American Educational Research Association (AERA), the American Psychological Association (APA), and the National Council on Measurement in Education (NCME) (AERA, APA, & NCME, 1999).

Many experts agree that exposure to psychometric content should appear early in graduate training. In 1978, Russ noted the value of an introductory seminar in psychometrics as the best way to "teach the skills necessary to evaluate tests critically in areas of reliability, validity, and appropriate use of the test" (p. 454). Psychometrics is usually introduced during didactic courses in a doctoral program prior to a clinical practicum. According to Stout (1992), "it appears that a core exposure to theory, instrument construction and development, administration, scoring, and interpretation is best done in the training program" (p. 16). In contrast to perspectives that emphasize early acquisition of psychometric concepts in a didactic format, writers who focus on the applied aspects of assessment can seem to downplay the importance of basic psychometric knowledge as a training need that is separate from beginning assessment training (Piotrowski & Keller, 1992).

Whether training should occur in reference to a particular intellectual or personality tests is open for debate. Early writers such as Levy (1974) suggest that "it is more important that students know what is entailed in the development and standardization of tests, how to evaluate the research bearing upon them, and the principles of good clinical test administration, than it is that they become proficient in the administration of any particular set of diagnostic tests" (p. 16).

In contrast, Piotrowski and Keller (1992) emphasize the importance of specific assessment instruments. They reviewed the most commonly used tests in applied settings and in their implications for training, they stated the following: "we agree with others that there is a critical difference between teaching *how* the clinician approaches 'psychological assessment,' analyzes the psychometric properties of tests, and integrates test data versus mastering certain specific tests …. However, we firmly believe that these fundamental aspects of assessment are *learned* on specific tests" (p. 75). In their section on implications for training, Piotrowski and Keller recommend that students "review the clinical and research literature on the select tests" (p. 78) but do not mention the need for basic psychometric courses or detailed knowledge in order to understand this information.

13.5.2 The Training and Psychometric Competencies of the Advanced Beginner – Readiness for Internship

As students move from readiness for practicum to readiness for internship, the nature of competency in psychometrics changes and should increase. According to Hatcher and Lassiter (2007), students should begin internship with a baseline competency of knowledge from graduate classroom experience and practicum training that includes skills in assessment. However, exactly what students should know in psychometrics and assessment, and the skills they should possess when they begin internship has been continually debated. As Levy expressed in 1974, "the quality of training of students when they arrive at their internships serves as a focus of controversy between university and internship-based psychologists concerning their respective conceptions of the practice of clinical psychology" (p. 17). This being said, there is a general consensus among internship directors that psychometric knowledge should be a prerequisite for internship. Clemence and Handler (2001) surveyed internship training directors to ascertain what students are expected to know before internship. Of the sites surveyed, 79% indicated that knowledge of psychometrics and/or test construction was an important area of competency. Unfortunately, not all students are prepared in the basic areas of assessment competency as indicated by the fact that 56% of internships provide instruction in introductory assessment skills (Clemence & Handler). If doctoral programs follow the Practicum Competencies Outline, psychological assessment is one of the skills that should be developed during practicum before internship commences (Hatcher & Lassiter).

Assuming basic competencies are met before internship, students should move from advanced beginner status to competent status through internship training experiences. Almost all internships (i.e., 99%) provide assessment training with emphasis on report writing and advanced assessment skills for proficient independent practice. During the internship year, assessment competencies may continue to develop; however, core psychometric skills may not. Very few internship programs provide training in assessment research which is one way that

core psychometric skills could be advanced. Only 21% of the internships surveyed by Clemence and Handler (2001) provided any training in research in assessment during the course of internship (p. 21). Thus, preparation for assessment research or advanced psychometric skills is not often a focus of internship training.

13.5.3 Different Schools of Thought

At this juncture, it is necessary for us to take a slight detour in our consideration of aspects of psychometric knowledge that are foundational for competency in clinical assessment and clinical research to address various issues related to this content area. Up to this point, the majority of the discussion and literature cited has been generated by professionals whose main professional identification is psychology. As we move from a consideration of basic competency to our eventual discussion of expert competency, it is important to address areas in which there may be a difference of opinion as to what constitutes the core body of knowledge in psychometrics.

There are those who view psychometrics as a means to an end for the purpose of clinical research or clinical practice and there are those who are engaged in advancing the field of psychometrics. This distinction gives rise to a debate of what psychometricians might like to see as the competencies of an advanced beginner upon graduation from a doctoral program. Boorsboom (2006) is a notable voice in this discussion. Boorsboom in his article, "The Attack of the Psychometricians," describes a "lack of integration between psychometrics and psychology" (p. 426) that has led to a disconnect between psychometric theory and psychological research. In Boorsboom's opinion, "psychometrics, as a discipline, has not succeeded in penetrating mainstream psychological testing to an appreciable degree" (p. 425), such that outdated concepts such are being taught in psychology training rather than new innovations from the field of psychometrics. Some of the reasons cited for this lack of integration include insufficient mathematical training in calculus and matrix algebra by psychology students, and an over-reliance on the *Statistical Package for the Social Sciences* (and the defaults embedded within) as a statistical program relative to other statistical software.

It is clear from Boorsboom's (2006) writings that at present, psychologists are failing to achieve basic competency particularly in the area of psychometric modeling and are relying on outdated models of psychometric concepts. Boorsboom asserts that psychometric modeling should be part of the skill set of the average researcher in psychology and gives recommendations for revising material taught in textbooks with regard to classical test theory, construct validity, and operationalist thinking. This represents a significant departure from most sources including the APA's Guidelines for Test User Qualifications which state that it is important for users to understand classical test theory, but an understanding of IRT is only required if IRT is deemed "appropriate or necessary" (p. 1100).

13.5.4 Achieving Proficiency – Readiness for Practice

Going back to our early training example of Donna, let us assume that it is several years later and Donna has returned to St. Paul's Hospital to begin postdoctoral training, semi-independent

or independent practice. She has completed her predoctoral training requirements including her predoctoral internship. Although she is still under supervision, she is in the final phases of her training before becoming an independent clinical psychologist. At this stage in her career, what should Donna exhibit in regards to her level of competency in psychometrics? Should she be able to teach a class in the topic, supervise practicum students in assessment, determine the standard or fixed battery to be used in the child assessment clinic at the hospital?

As we review Donna's level of competency at this level, we expect her to have a certain level of proficiency in psychometrics. According to Marlowe, Wetzler, and Gibbings (1992), Donna should be "thoroughly familiar with methods of test construction, as well as indices of reliability, validity, generalizability, so as to be [a] competent and effective consumer[s] of tests, test manuals, and related professional literature" (p. 15).

There are a number of perspectives which underlay the determination of competency and training in psychometrics. Training models differ for those who are being trained as consumers versus creators of psychometric knowledge. This is sometimes considered to be indicative of a scientist versus practitioner model of graduate training. However, both scientist and practitioner skills are essential for competent assessment. This dialectic between science/research and practice is best summarized by Marlowe et al. (1992) who discuss psychometric and assessment competency from the following standpoint: in the area of assessment, it is "insufficient for … curriculum to focus solely on the "interpretive aspects" or 'how to do it' of testing … without simultaneously attending to general psychometric principles and test-specific attributes" (p. 13). Although these authors assert that "one cannot be clinically competent without research knowledge" (p. 11), they describe competency in terms of effective consumption of assessment manuals and research literature. However, the extent to which practicing psychologists should be directly engaged in psychometric and assessment research and generative activities is left open for debate. In reality, very little training in assessment research or advanced psychometric skills is received after initial coursework and practica are complete. Advanced training in psychometrics is usually acquired by those who seek out specialized programs and opportunities. Postdoctoral training in psychometrics is generally obtained through fellowships at institutes and universities. For example, the Institute for Education Sciences provides funding for universities to establish postdoctoral training programs in education measurement with the specific goal of producing "a cadre of education researchers capable of and willing to conduct a new generation of methodologically rigorous and educationally relevant scientific research that will provide solutions to pressing problems and challenges facing American education" (Interdisciplinary Research Training Programs in the Education Sciences, 2007). Readiness for independent practice would thus entail having the skills to contribute to the field as a psychometrician who can "conduct rigorous evaluation studies, develop and evaluate new products and approaches that are grounded in a science of learning, and design and validate tests and measures" (Institute of Education Sciences, 2008). Differences in training lead to variations in professional outcomes. The next step following proficiency is expert competency. Expert competency in assessment is distinct from expert competency in psychometrics. In the following section, we address both of these areas with greater attention to expert competency in psychometrics. A detailed discussion of expert assessment competency is provided in the cognitive and behavioral assessment chapters of this text.

13.6   Expert Competencies in Psychometrics

What are the expert competencies with regard to psychometrics? And, who are the professionals that have achieved expert or master competency? There is less consensus and literature on the definition of expert or master as compared to the articulation of basic competencies. The APA Task Force on the Assessment of Competence in Professional Psychology (Final Report, October 2007) defines experts as those who excel in particular competency domains, and masters as individuals who are creators and innovators. In this model, individuals who excel in psychometric competency domains would be considered experts, and creators and innovators of psychometrics would be viewed as masters. In comparison, the APA division 12 taskforce on assessment training for the twenty-first century was composed of individuals that many would consider experts in the field of assessment (APA Presidential Task Force, 1999). Experts were defined as those who were "eminent in assessment, especially if they had produced research in more than one area of assessment" (p. 10). This definition emphasizes the reputation of those in the field as well as their contributions to research. On the APA division 12 task force, Gwynneth Boodoo was chosen to represent the area of psychometrics and at the time was working for the Educational Testing Service. Individuals who advance the field of assessment and psychometrics through their work at institutions that shape the test instruments that psychologist rely upon would also be considered experts.

13.6.1 Experts in Assessment and Psychometrics

An expert in assessment should have fluency or command of the assessment literature in their area of expertise, their interpretation skills should be based on the latest scientific findings, and their experience and knowledge are integrated in their conceptualizations of psychometric test data. Their breadth and depth of knowledge in assessment and psychometrics should enable them to fluidly respond to challenges and aberrations from typical or modal findings.

How does one gain expertise in assessment and psychometrics? Earlier, we discussed readiness for practicum, internship, and independent practice. The expert has moved through these levels of competency and has furthered his or her skills often by engaging in roles or activities that require continual skill refinement and knowledge acquisition. These individuals may teach, mentor, and supervise in their area of expertise. They may participate in continuing education for themselves and provide opportunities for continuing education to advance the skills of others. And, they are distinguished from those with less proficiency by their role as consultants when challenging situations arise.

What are the activities experts are engaged in? The following list illustrates some of the activities in which experts in assessment and psychometrics are engaged. Experts may write reviews for the *Mental Measurements Yearbook*, review and critique newly developed tests, author textbooks on the intricacies of various assessment instruments or psychometric theory, revise outdated assessment instruments, conduct large scale reliability studies, write technical manuals to accompany administration manuals, and may develop computerized scoring and interpretation programs. Psychometric experts may be members or officers of The Psychometric Society which is a professional organization devoted to the advancement of quantitative measurement (Psychometric Society, 2008) or Division 5 (Evaluation, Measurement and Statistics) of the American Psychological Association. Experts in assessment may be more likely to be

expert consumers of psychometric research and knowledge, and experts in psychometrics may be more likely to be expert producers of such knowledge.

13.7 Summary

Within the field, there is concern that training is inadequate to produce experts and masters in psychometrics and assessment. This is best illustrated by a comment from Weiner (2007) on education and training in personality assessment in which he bemoans the fate of experts in assessment. "From whence will come future generations of psychologists sufficiently well educated and trained in personality assessment to provide quality services, conduct good research, and function effectively as teachers and supervisors" (p. 1). Weiner does not believe competence in personality assessment should be a specialized skill, but rather believes that training has not been sufficient to ensure proficiency in assessment for most individuals. Assessment experts who are senior in the field have wondered how their ranks will be refilled (Weiner), and have reflected concerns regarding declines in the education and training of juniors (Merenda, 2007). Merenda discusses the decline of psychometricians, quantitative psychologists, and personality assessment psychologists. He cites problems with measurement education and training in personality assessment as reasons for the decline in individuals proficient in these areas. Overall, graduate training in measurement appears to be declining (Aiken, West, Sechrest, & Reno, 1990). Some individuals identified as experts have also retired or died leaving unfilled openings for assessment and psychometric experts. For example, Paul Meehl was noted for his contributions to prediction models and clinical versus statistical prediction died in 2003. Mark Appelbaum, another well-regarded quantitative psychologist, noted that that many psychometricians are becoming more senior and retiring (Clay, 2005). Furthermore, large assessment companies have been criticized for a lack of sufficient psychometricians on staff due to the shortage of adequately trained professionals. In order to address the pressing need for greater numbers of quantitative psychologists, the American Psychological Association created a task force in 2006, the task force for increasing the number of quantitative psychologists, which is charged with developing ways to increase the number of psychologists entering the field of quantitative psychology (APA, 2008).

Experts in psychometrics are greatly needed given the ever-changing landscape of quantitative methodology and significant advancements in the complexity of tests and measures. We hope that the articulation of psychometric competency in this chapter may highlight the importance of this set of knowledge and skills, and further serve to attract individuals to pursue psychometrics by bringing greater attention to this underrepresented and possibly ignored area of psychology and education.

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14 Design and Analysis

Joseph R. Scotti · Vanessa M. Jacoby · Stanley Cohen · Julie Hicks Patrick

Abstract: A critical aspect of moving psychology into the realm of paradigmatic science, and of ensuring the development and meaningful dissemination of empirically supported interventions, is competency in research design and statistical analysis. We present evidence that psychology graduate programs are not performing as well as they might in this area of training. An expanded version of the *Competency Cube Model* is used to present the specific skills that are central to seven areas of research design and data analysis by levels of training (bachelors, master's, doctoral) and career path (clinical, research). The seven areas include: problem conceptualization, measurement and scaling, research methodology, core statistics, specialized statistical procedures, data analysis and management, and communication of findings. In keeping with the Competency Cube Model, we discuss both foundational (broad professional skills) and functional (area-specific skills) competencies in the seven areas, and introduce three overlapping stages of competency, from *familiarity to knowledge*, *knowledge to use*, and *use to contribution*. An extended listing of skills by content area, level of training, and stage of competency is presented to expand the discussion on both the curricula that should be offered for various academic degrees, and the manner in which the knowledge and skills learned should be documented or demonstrated. We recognize the multiple variations and mixtures along a continuum from practicing clinical psychologist to basic research psychologist, and the resulting differences in competencies in research design and statistical analysis. As the field experiences a shortage of quantitative psychologists, researchers need to better document their competence in this area beyond the traditional means (e.g., peer-reviewed publications), as well as seek lifelong learning opportunities to expand their knowledge and skills. Clinical psychologists, on the other hand, must remain sufficiently conversant with this content area so as to evaluate published intervention research and competently evaluate their own practice.

14.1 Overview

Psychology is striving to be a science, although the field appears to be a long way from having a unified paradigm or even agreeing that there should be a single unifying paradigm (Kuhn, 1996; Popper, 2002a, b; Staats, 1990, 1995). Regardless of the status of this quest, to reach the goals of understanding human behavior, be it of individuals or groups, and effectively improving people's lives in a positive manner, it is critical that we use the scientific methods in basic and applied research and, we would argue, within clinical practice. Given clinical psychology's research and applied branches, one may find clinical psychologists calling themselves scientist-practitioners, clinician-researchers, basic or applied researchers, or clinicians, among other titles. These descriptors, be they of individuals or training programs (e.g., doctoral program, internship site), place greater or lesser emphasis on research, application, and empiricism. Clearly, clinical researchers must be conversant with research design and data analysis techniques at the level necessary to competently investigate their area of interest and publish

their findings. However, most clinical psychologists would likely identify themselves as practitioners (American Psychological Association [APA], Center for Workforce Studies, (n.d.); Bechtoldt, Norcross, Wyckoff, Pokrywa, & Campbell, 2001), and may view research design and data analysis only as necessary – and aversive – graduate school hurdles to be gotten over and then left behind. Nonetheless, even practitioners should be sufficiently familiar with research design and data analysis in order to consume the research literature and make sound, informed judgments as to whether or not to include specific assessments and interventions in their practice.

Given the above and the goals of these volumes on clinical psychology competencies, in this chapter we focus on the stages of competency in research design and data analysis necessary in relation to the levels of training and career paths. We utilize three stages of competency, ranging from being familiar with designs and techniques to being able to effectively use and teach these designs and techniques, and, finally, to being contributors to the development of new designs and techniques. Level of training is reflected in our coverage of what should – in our opinion – be known at the basic level of undergraduate training up to the expert knowledge and use at the level of professional researchers and practitioners. We stress that, even at the highest degree of expertise, continuing education and lifelong learning are imperative for keeping abreast of new developments in research design and data analysis, just as in any active field. Finally, we discuss differential competencies according to career paths as divergent as solely providing clinical services to those focused on basic laboratory research, and various combinations in between.

We begin with a discussion of the construct of *competency*, and then provide a listing of research designs and data analysis techniques. We suggest stages of competency needed in these designs and techniques for various training levels and career paths, using research and applied examples to support our decisions. We present this information for its heuristic value in making decisions about curriculum design and postgraduate training. This step is necessary as discussion of competency in multiple areas of clinical psychology remains at the level of defining the basic construct rather than elucidating the specific behaviors and skills required for varying stages of competency. For example, the conference titled *Competencies Conference, 2002: Future Directions in Education and Credentialing in Professional Psychology* (Kaslow et al., 2004) focused on the domains of competency, but did not provide a listing or catalog of skills and knowledge. The outline provided here is a starting point for further discussion, with the eventual goal of determining skill-based competencies that can be taught and evaluated. We emphasize the importance of lifelong learning in the development of increasing degrees of expertise and note the multiple ways in which skills can be evaluated.

14.1.1 Defining Competency

One online dictionary (Dictionary.com, n.d.) defines *competence* as "the quality of being competent; adequacy; possession of required skill, knowledge, qualification, or capacity." Although a seemingly adequate definition, it focuses on *possession* rather than *demonstration* of skills and knowledge and does not take into account how one might measure or evaluate the demonstration of skills and knowledge. Rodolfa et al. (2005) provide a particularly cogent discussion of the concept of competency. The most basic characterization of competency should

reflect knowledge, performance, and outcome (Reilly, Barclay, & Culbertson, 1977). Rodolfa et al. provide a three-dimensional model, the *Competency Cube*, to elucidate the development of competency across multiple *functional* domains in psychology, including (a) assessment, diagnosis, and case conceptualization; (b) intervention; (c) consultation; (d) supervision and teaching; (e) management and administration; and, the focus of this chapter, (f) research and evaluation. These functional domains represent the knowledge, skills, and practices of the professional psychologist. However, there are other competencies that form the foundation upon which these functional competencies stand. The *foundational* competencies described by Rodolfa et al. include: (a) reflective practice and self-assessment; (b) scientific knowledge and methods; (c) relationships; (d) ethical and legal standards, and policy; (e) individual and cultural diversity; and (f) interdisciplinary systems. An essential element of this model is the interaction between foundational and functional competency domains. The focus of this chapter is on the functional competency of research and evaluation, specifically the component of research design and statistical analysis, and its intersection with each of the six foundational competencies.

The functional competency of research and evaluation, as described by Rodolfa et al. (2005), involves "the generation of research that contributes to the professional knowledge base and/or evaluates the effectiveness of various professional activities" (p. 351). This description most closely fits what one might consider to be the "expert" stage of competence, and focuses on the *contribution* stage of competency. We would add two subordinate stages of competency, that of *knowledge* and familiarity, and *use* and consumption. This allows us to expand this definition to fit different levels of training and career paths. For instance, the undergraduate psychology major should be knowledgeable about basic analysis procedures, such as correlation, *t*-tests, and analysis of variance (ANOVA), and might use these procedures to generate an honors thesis that will not necessarily contribute to the professional knowledge base, but will contribute to the student's training. At this level of training, competence would be evident as the ability to describe procedures and use them within the context of a course examination or project. This is a critical building block for the next level of training, such as graduate school, in which one further develops competence.

14.1.2 Foundational Competency

The Competency Cube model (Rodolfa et al., 2005) calls for multiple foundational competencies within each domain of functional competency. That is, one must be competent in each *foundational* domain in order to be fully competent in any one *functional* domain. As noted in the prior section, Rodolfa et al. outline six foundational competencies. Clearly, within the functional competency of research and evaluation, one must have the foundational competency of scientific knowledge and methods; that is, a respect for the scientific method and empirically derived knowledge; the ability to conceptualize problems; and the knowledge of basic statistical procedures, methods of data collection and analysis, and research designs at various levels of sophistication. The other five foundational competencies may appear less relevant, but are of equal importance. For instance, reflective practice and self-assessment requires one to know the limits of her or his skills in designing research studies, analyzing data bases, and having a commitment to continuing education to develop and enhance one's skills. Not recognizing one's limits could result in inappropriate use of statistical procedures and a misrepresentation of findings. The

foundational competency of legal and ethical standards has clear implications for research and evaluation with regard to the requirements for the protection of human research participants, privacy of research and clinical information (Health Information Protection and Portability Act [HIPPA]), and the need to document the effectiveness of interventions. If one fails to competently adhere to these standards it could lead to physical or psychological harm of clients or research participants.

The foundational competency of individual and cultural diversity requires one to be continuously aware and sensitive to the diversity of the populations with which he or she may interact, including issues of culture, race, ethnicity, sexual orientation, gender, age, and mental and physical disability. The issue of diversity most immediately comes to mind with regard to clinical practice. The possible cultural biases in assessment devices have long been a topic of discussion within psychology (Cleary, 1968; Sattler, 1988); this is now also a prominent issue in the tailoring of interventions for specific groups (Bernal & Scharró-del-Río, 2001; Rosselló, Bernal, & Rivera-Medina, 2008; see the APA journal: *Cultural Diversity and Ethnic Minority Psychology*). Diversity is also of critical importance in research. Clinically relevant research has moved far beyond the captive population of white college students to a focus on specific groups or populations in the community (unless, of course, the focus is meant to be college students). Knowledge about, understanding of, and sensitivity to, diversity is vital to even formulating meaningful and relevant empirical questions. Further, ensuring diversity within a research sample adds to the ability to generalize findings to the population at large. Less obvious when conducting research with culturally and ethnically diverse groups are issues such as: (a) accurate translation and back-translation of assessment measures, (b) willingness to participate in research that crosses the cultural boundaries of self-disclosure, and, (c) culturally specific gender roles that impact the ability to be alone with a researcher of opposite gender and may prevent adult women from giving their own informed consent. Of course, all research samples need not be heterogeneous and cover the full range of diversity; some questions require homogenous samples in order to control for critical factors and potential confounds.

Lack of competence in this area, in terms of sensitivity to the wide range of human diversity, may well result in wasted effort and unrepresentative findings. The insensitive or unaware researcher may also cause damage to relationships with the community or population with which one is attempting to work, which is the next foundational competency. Viable research is dependent on good working relationships with individuals, groups, agencies, and communities in order that the research can even be accomplished. More and more, larger research projects are planned and implemented with the input of important stakeholders, such as representatives of the population under study, agencies that might assist in the conduct of a project, and policy-makers for whom the findings may hold relevance.

Lastly, the foundational competency of interdisciplinary systems involves the ability to effectively interact and collaborate with other professionals within psychology and across multiple disciplines. Large research grants are more likely to be funded when they are multidisciplinary and multisite, as this adds a diversity of perspectives and research questions and improved sampling of the population of interest. A psychologist may be at the forefront of knowledge in her or his field of interest, such as posttraumatic stress disorder (PTSD), but may benefit from collaboration with colleagues in other disciplines who specialize in rural health, military affairs, or social policy. Such a collaboration would bring to the fore a broader range of empirical questions than the psychologist acting alone (e.g., combat exposure and levels of PTSD versus additional risk factors associated with living in a rural community). Without

interdisciplinary collaboration, research is narrower, and has a lower likelihood of advancing the knowledge base. No individual can be an expert in every area, no matter what level of training is obtained.

14.1.3 Lifelong Learning

The third dimension of the Competency Cube model (Rodolfa et al., 2005) illustrates the levels of professional development over the course of one's career. In the Rodolfa et al. model, the levels begin at doctoral education and end with "continuing competency," that being the gaining, maintaining, and enhancement of competencies throughout one's professional career. These authors suggest that their levels may be depicted in finer detail; we do so here. We would contend that the levels of professional development might better be conceptualized as the contexts within which training occurs. These contexts include formal education at the bachelor's, master's, and doctoral levels. Additional training in internship, residency, or fellowship programs may occur following any level of education. Continuing education in the form of additional coursework, professional conferences, seminars, and workshops may be completed at any point in one's career. These training contexts do not occur in the linear fashion that this axis of the Competency Cube implies. We agree that the development of competencies is a lifelong learning process; however, it is not dependent on final academic degree, but on recognizing one's competencies, and thus one's limits, and seeking to continually develop and master new skills.

14.1.4 Stages of Competency

Harkening back to the earlier definition of competency as "possession of knowledge and skills," competency can be viewed as having three stages: knowledge, use, and contribution. Here, we view knowledge as the basic information learned and demonstrated through class examinations, national licensing exams, and specialty board certification exams. It is, in essence, the verbal or written confirmation of one having learned the essential information about specific types of research design and data analysis needed to then proceed to the stage of competent use. For example, one may be able to describe the rationale and formula for conducting a *t*-test, or the statistical underpinnings of hierarchical linear regression, but be currently unprepared to decide which analyses are used with which research designs and how to construct a data set and run and interpret the analyses independently. We would say that this individual is competent at the stage of requisite *knowledge*, but not yet competent at the stage of independent *use*. Reaching this latter stage of competence requires experience and skill building.

When, then, is one considered competent in *use* of research designs and statistical analysis procedures? Again, we would note the importance of level of training, such that the master's candidate, in developing her or his thesis protocol, will need to demonstrate the ability to select among basic designs (e.g., survey, two-group comparisons, 2×2 factorial) and use them appropriately. Doctoral candidates will likely utilize higher-order designs that require sophistication in regression procedures and the handling of missing data. Similarly, a master-level project might take advantage of a college student population, while dissertation research might involve intervention with a clinical population. Competencies at these levels of education would be assessed via the final thesis or dissertation document and oral defense. At higher levels of

professional independence, such competencies are demonstrated by the acceptance of manuscripts by peer reviewers, ultimately for journal publication. Note, however, that a bachelor-level research assistant might work in a setting that trains her or him in the competent use of higher-order statistical designs, such that the assistant becomes a meaningful contributor to a research publication. As such, the stage of competence is not dependent solely on formal educational degree, but includes multiple training contexts and continuing professional development.

The highest stage of competence is the ability to *contribute*, not only to the knowledge base through publication, but to establish one's expertise in an area of research or practice through the improvement of existing techniques or the development of new procedures and directions. This stage of competence is likely evaluated by one's prestige in a field as noted by frequency of citation of one's works and the acclamation of one's colleagues.

With this framework in mind, the next step in the development of a complete competency model is to have a comprehensive list of knowledge and skills that could be evaluated at the various levels of training and stages of competency discussed above. The stages of competency that we suggest are needed at different levels of training are listed in ❯ Table 14.1. We note that there will be variation in the stages of competence (knowledge, use, contribution) that should be evident, not only by level of training (bachelor's, master's, doctoral), but also according to one's professional focus (research, clinical practice, teaching, or a combination of the three). We illustrate the range of competence that might be seen for each skill at various levels of training and career paths by the ratings of 1 (*family to knowledge*), 2 (*knowledge to use*), and 3 (*use to contribution*) entered into the table. These ratings reflect an overlapping range of competency at each level. Functionally, one must be competent in the work they are doing. This stage of competence may often be beyond the stage of competence required to obtain specific academic degrees. Broadly, in keeping with the design of this volume, *Basic Competency* is reflected in familiarity, knowledge, and movement to independent use (ratings of 1–2) of research designs and statistical analysis procedures. *Expert Competency* is reflected in fully independent use, plus not only using techniques to contribute to the research base in an substantive area, but also being able to contribute to the further development of research designs and statistical analysis procedures. In the next section, it is evident how we view the "basic" and "expert" stages of competency as a continuum along which one can vary according to specific domains, levels of training, and contexts.

14.2   Basic and Expert Competencies

Having discussed the construct of competency, its various stages, and its relation to levels of training, we turn to specific functional competencies within research design and data analysis. ❯ Table 14.1 presents a listing of these subordinate competencies in seven domains, from problem conceptualization (e.g., scientific method, literature review, hypothesis development) through measurement and scaling (e.g., psychometrics), research methodology (e.g., design selection, validity threats, data collection), core statistics (e.g., descriptives, ANOVA, regression), specialized statistical procedures (e.g., survival analysis, bootstrapping), and data analysis and management (e.g., data entry and error checking, security), to communication of findings (e.g., publication, plagiarism). These seven domains are meant to represent the key components in the application of foundational competency of scientific knowledge and methods to the functional competency of research and evaluation. These components range from initial conceptualization to the dissemination of findings. The reader is reminded that this

◼ **Table 14.1**

Suggested stages of competency in seven areas of research design and data analysis by levels of training and career path. Three stages of competency are: (1) familiarity to knowledge, (2) knowledge to use, and (3) use to contribution

Skills within areas of research design and data analysis	Level of training and career path				
	B.A./B.S.	M.A./M.S.	Ph.D./Psy.D.	Clinical career	Research career
Problem conceptualization					
Background information					
Scientific method	1	2	2	2	3
Deductive versus inductive approach	1	2	2	2	3
Theoretical orientation	1	2	3	3	3
Competing theoretical models	1	2	3	3	3
Basic and applied research in support of competing models		1	2	2	3
Identified area of research focus		1	2	2	3
Empirical and conceptual bases of area of focus		1	2	2	3
Literature review					
Comprehensive literature search (text and web-based)	1	2	3	3	3
Critical review and evaluation of research	1	1	2	2	3
Principal strengths and limitations of research		1	2	2	3
Interpretation and extension of prior research		1	2	2	3
Hypothesis development and testing					
Development of research questions	1	2	3	3	3
Independent and dependent variables	1	2	3	3	3
Confounding and nuisance variables	1	2	3	3	3
Testable, falsifiable, operationally defined hypotheses	1	2	3	3	3
Type I/Type II error and power	1	2	3	3	3
Significance testing issues (e.g., probability versus effect size)		1	3	3	3
Conceptual analyses		1	2	2	3
Measurement and scaling					
Measurement theory					
Classical test theory	1	2	3	3	3
Generalizability theory		1	2	2	3
Item response theory			1	1	3

(continued)

◘ **Table 14.1** (continued)

Skills within areas of research design and data analysis	Level of training and career path				
	B.A./B.S.	M.A./ M.S.	Ph.D./ Psy.D.	Clinical career	Research career
Psychometrics					
Reliability	1	2	3	3	3
Test-retest and alternate forms	1	2	3	3	3
Validity	1	2	3	3	3
Construct (e.g., face, content, concurrent, convergent, discriminant)		1	2	2	3
Item analysis		1	2	2	3
Internal consistency (e.g., Cronbach's alpha)		1	2	2	3
Criterion and predictive		1	2	2	3
Incremental		1	2	2	3
Principles of test construction		1	2	2	3
Derivation of scales		1	2	2	3
Sensitivity and specificity of measures		1	2	2	3
Adaptive testing					
Issues of test bias	1	2	3	3	3
Criterion versus norm-based testing	1	2	3	3	3
Floor/ceiling items		1	3	3	3
Use of tests in selection		1	2	3	3
Scaling (e.g., unidimensional, multidimensional)			1	1	3
Research methodology					
Methods					
Naturalistic observation	1	2	3	3	3
Qualitative	1	2	2	2	3
Survey research	1	2	3	3	3
Experimental group research	1	2	2	2	3
Laboratory experiments	1	2	2	2	3
Field experiments	1	2	2	2	3
Person by situation		1	2	2	3
Program evaluation		1	2	2	2
Epidemiology		1	2	2	2
Designs					
Case study	1	3	3	3	3
Correlational	1	2	3	3	3

◘ **Table 14.1** (continued)

Skills within areas of research design and data analysis	B.A./ B.S.	M.A./ M.S.	Ph.D./ Psy.D.	Clinical career	Research career
			Level of training and career path		
Randomized group	1	2	2	2	3
Cross-sectional	1	2	2	2	3
Longitudinal/time series	1	2	2	2	3
Single-subject	1	2	2	3	3
Nested		2	2	2	3
Counterbalanced (e.g., Latin squares)		1	2	2	3
Quasi-experimental		1	2	2	3
Nonequivalent control group					2
Discontinuity					2
Selection of method and design					
Internal validity	1	2	3	3	3
External validity	1	2	3	3	3
Generalizability of sample	1	2	3	3	3
Appropriate to research question, hypotheses, and population	1	2	3	3	3
Advantages/limitations of designs and methods		2	2	2	3
Advantages/limitations of sampling procedures		1	2	2	3
Core statistics					
Mathematics and introductory statistics					
Probability	1	2	3	3	3
Population and sample statistics	1	2	3	3	3
Normal distributions	1	2	3	3	3
Sampling error		2	3	3	3
Descriptive statistics					
Visual inspection	1	2	3	3	3
Classic graphical displays (e.g., histograms, leaf-tree plots)	1	2	3	3	3
Measures of central tendency	1	2	3	3	3
Measures of variability	1	2	3	3	3
Variation from normal distribution		2	3	3	3
Modern graphical displays (e.g., QQ plots, kernel density estimates)			1	1	2

(continued)

🔹 **Table 14.1** (continued)

Skills within areas of research design and data analysis	Level of training and career path				
	B.A./ B.S.	M.A./ M.S.	Ph.D./ Psy.D.	Clinical career	Research career
Basic inferential statistics					
t-test	1	3	3	3	3
Pearson correlation	1	3	3	3	3
z-test		2	3	3	3
Basic nonparametric statistics					
Chi square	1	2	3	3	3
Rank-order tests, nonparametric correlations		2	2	2	3
Nonparametric ANOVA (e.g., Kruskal-Wallis)			2	2	3
Bayesian distributions			2	2	3
Analysis of variance					
Two group	1	2	3	3	3
Factorial		2	3	3	3
Repeated measures		2	3	3	3
Planned comparisons (specific contrasts, orthogonal comparisons)		2	3	3	3
Post hoc tests		2	3	3	3
Analysis of covariance		1	2	2	3
Regression					
Simple linear regression	1	2	3	3	3
Ordinary least squares multiple regression		1	2	2	3
Hierarchical regression			2	2	3
Logistic			1	1	3
Nonlinear models and random effects models			1	1	3
Advanced procedures					
Mediation and moderation	1	2	3	3	3
Factor analysis		1	3	3	3
Principle components analysis		1	3	3	3
Multivariate procedures (e.g., MANOVA, canonical, discriminate)		1	2	2	3
Cluster analysis			2	2	3
Confirmatory analysis			2	2	3

(continued)

◘ **Table 14.1**   (continued)

Skills within areas of research design and data analysis	Level of training and career path				
	B.A./ B.S.	M.A./ M.S.	Ph.D./ Psy.D.	Clinical career	Research career
Catagorical data (e.g., logistic, logit, probit)			2	2	3
Log linear			1	1	3
Structural equation modeling (e.g., path analysis, causal modeling)			1	1	3
Multilevel hierarchical models			1	1	3
Specialized statistical procedures					
Single-subject analysis		1	3	3	3
Meta-analysis		1	2	2	3
Qualitative analysis		1	2	2	3
Growth curve and latent growth models			2	2	2
Trajectories, survival, and hazard analyses			2	2	2
Approaches to missing data					
Characteristics of subjects with missing data	1	2	3	3	3
Simple replacement (e.g., surrounding points, last observation)		2	3	3	3
Bootstrapping, resampling			1	1	3
Multiple imputation procedures			1	1	2
Regression, expectation maximization			1	1	2
Data analysis and management					
Data management					
Data entry (reliability and cleaning)	1	3	3	3	3
Data recoding, transformation, and reduction		2	3	3	3
Data security and retention		2	3	3	3
Public data sets		2	3	3	3
Communication of findings					
Plagiarism	2	3	3	3	3
APA publication style	2	3	3	3	3
Clear report of results and implications	1	2	3	3	3
Professional conference presentation	1	3	3	3	3
Manuscript submission (e.g., journal, book chapter, web-based)		2	3	3	3

listing is only a starting point. Any topic in this table arguably can be collapsed or expanded from what is presented here, and other topics can be added. This listing is a work in progress with the eventual goal of determining specific skill-based competencies that can be taught and evaluated according to different levels of training.

A primary source for the construction of this table is the work of Aiken, West, and Millsap (2008; see also Aiken, West, Sechrest, & Reno, 1990). The work of these authors was of critical importance as they had surveyed all Ph.D.-level programs in the USA and Canada, resulting in an extensive listing of topics in research methodology and data analysis in the curricula of those programs, as well as the "judged competence" of graduates of those programs. We extended and modified the listings of Aiken et al. (2008) by reference to the Research Competency Checklist developed by several of the authors and other colleagues at the West Virginia University Department of Psychology, and our own knowledge and experience. In what follows, we provide research examples to illustrate the domains covered in the table, along with the varied expectations associated with different stages of competency and levels of training. We focus on the intersection of the foundational competency of scientific knowledge and methods, and the functional competency of research and evaluation. Additional foundational competency domains are discussed to illustrate necessary competencies beyond that of scientific knowledge and methods.

We utilize, as a basic research example, a study conducted by Scotti et al. (Scotti, Majewski, Heady, & Tunick, 2008) on West Virginia veterans returning from military service in the conflicts in Iraq and Afghanistan. The basic aspects of this study were the conduct of a large sample mail survey ($n = 6,400$) asking recent returnees about their pre- and post-military functioning, combat exposure, psychiatric symptoms, and help-seeking behavior. We use the decisions made throughout the conduct of this study to demonstrate key topics from ▸Table 14.1, providing exemplars of directions we might have taken at each choice point. We do not present actual results from that study; any "data" are purely to demonstrate key points.

14.2.1 Problem Conceptualization

The topics in ▸Table 14.1 outlined under the functional competency of problem conceptualization represent initial steps in the scientific process, including selection of focus area, scientific approach, theoretical models, examination of existing literature, and hypothesis development. In our example, all research team members, regardless of level of training, had basic competency in the scientific method. That is, they understood the need for formal research methods to collect data systematically that would result in reliable, valid, and generalizable conclusions. Relating these steps to our example study, our initial selection of focus area began with a request from the West Virginia Legislative Committee on Veterans' Affairs to evaluate the current health and mental health status of veterans returning from the conflicts overseas and to assess their access to care. This is the kind of research question that might be presented by persons outside of a scientific discipline that needs to be focused, operationally defined, and developed into testable propositions. The resulting multidisciplinary research team consisted of a doctoral-level psychologist with 20 years of experience in the field of combat stress and survey research; and master-level professionals in social work and rural health care with strong backgrounds in survey implementation, knowledge of physical and mental health resources, and the specific needs of rural veterans. This team was able to narrow

the focus to the key question concerning the impact of combat exposure on returning veterans and their likelihood of accessing physical and mental health care. The familiarity of the team with the basic issues and findings from a review of recent literature resulted in their developing multiple testable hypotheses. Foremost among these hypotheses were: (a) veterans reporting higher versus lower levels of combat exposure will report a higher number of symptoms of depression and PTSD, (b) veterans with a higher versus lower number of symptoms of depression and PTSD will be less likely to seek professional care, and, (c) veterans residing in rural versus urban areas of West Virginia will differentially experience more symptoms and have less access to care.

The person at the bachelor-level of training may be familiar with some general issues involved in such a project, but typically would not be able to formulate a hypothesis beyond a simple comparison of symptom levels in two groups of veterans (e.g., a *t*-test comparing number of PTSD symptoms in high versus low combat exposure groups). Such a person would be unlikely to have extensive experience in this area and may not be able to complete an independent literature review resulting in the level of hypotheses developed by the research team. As level of training and stage of competency increased, one would expect a greater ability to identify knowledge bases and prior research that the research questions in the present study could both replicate and extend. Further, the number and types of independent variables (IVs) and dependent variables (DVs) that might be identified and included in the research questions would be more complex, and a greater ability to identify strengths and limitations of the study and prior research would be evident.

For instance, there is little existing research on the mental health and help-seeking of veterans residing in rural areas other than those who are recruited into studies by virtue of their having previously enrolled in services through Veterans' Affairs (VA) hospitals (Heady, 2007). Although there currently are 26 million veterans in the USA, fewer than 6 million participate in VA programs, or about 23%. Despite this rate being somewhat higher for veterans of the conflicts in Iraq and Afghanistan (40–50%; cf. Scotti et al., 2008; Tanielian & Jaycox, 2008), little is actually known about the mental health and help-seeking of the majority of veterans. The bachelor-level research assistant with limited knowledge would be unlikely to identify such a gap in the literature. Being competent at the stage of making applied and research contributions to the field, the research team readily identified the need to survey the general veteran population and to proceed through a recruitment source other than VA service lists.

Additional Foundational Competencies. We stress here, the importance of several additional foundational competencies beyond that of scientific knowledge and methods. First, we note the issue of interdisciplinary collaboration as exemplified by this team of researchers and the sharing of knowledge across specializations. Second, several members of the team were conversant with policy issues related to rural health and conducting research within the VA system. Further, each member of the team knew the boundaries of their competency in developing and conducting research of this nature. For instance, only senior members of the team with a higher level of training and a more advanced stage of competency could identify the conceptual models (e.g., two-factor model of fear conditioning as it relates to PTSD; Keane, Fairbank, Caddell, Zimering, & Bender, 1985), and study approaches (e.g., primarily inductive and data-driven) relevant to the project. Further, the more senior members were also aware of intrinsic limitations of the research (e.g., self-report data collected via mail survey) and the known and potential confounding variables (e.g., pre-military mental health status, state-wide literacy rates, lower return rates from those with more serious mental health problems).

14.2.2 Measurement and Scaling

❯Table 14.1 includes a section on measurement and scaling, the discussion of which is purposefully short because another chapter in this volume focuses solely on competency in psychometrics. However, it is critical to note the strong relation between research design, data analysis, and psychometrics, that being like a three-legged stool (as our coauthor, Stanley Cohen, has oft noted). Being competent at the stages of use and contribution in the area of measurement and scaling necessarily requires skills in psychometrics. Research employing measurements that are not reliable or valid calls into question the internal validity of the study and, consequently, its external validity (see Kazdin, 2003, on the priority of internal over external validity). Thus, without competence in psychometrics, the legs of research design and data analysis cannot provide a fully balanced stool.

With regard to this area, the bachelor-level student, and even the typical master's and doctoral student is very likely only to be familiar with the basic topics of measurement theory, test construction, reliability, and validity; and not be competent in their application (Aiken et al., 2008). Thus, those members of the research team whose competency in psychometrics was at the stage of knowledge and familiarity, might, at best, have attended to the psychometric properties of key measures incorporated in the survey, such as the PTSD Checklist (PCL; Ruggiero, Del Ben, Scotti, & Rabalais, 2003; Weathers, Litz, Herman, Huska, & Keane, 1993) and the Center for Epidemiological Studies: Depression Scale (CESD; Radloff, 1977). The senior researcher, who not only teaches a course in psychometrics, but has published in this area, readily identified issues related to scales that were locally developed to address specific questions of interest. For example, a listing of mental and physical health resources that was developed had face validity, was reviewed by multiple content-area experts, and piloted with veterans to ensure coverage and readability. Subsequent analyses were conducted to support the internal consistency and discriminant validity of the measures.

Additional Foundational Competencies. Examples of important additional competencies in this area include, as in all areas, knowing the limits of one's knowledge and skills. The ethical standards for psychologists (APA, 2002), with regard to assessment and measurement, might less readily come to mind, but are of critical importance. Further, with regard to cultural diversity, the simple translation and back-translation of scales from one language to another may not result in a full appreciation of the inherent differences in world views of various cultures (Dana, 1993). Thus, constructs related to independence and autonomy may not be translatable or even appropriate to cultures with different value systems with regard to community, family, and the individual (e.g., individualistic versus communal or competitive versus cooperative orientations; Dana, 1993). In the present research example, we were sensitive to both veteran and rural cultures in the development of specific sets of questions, and in carefully monitoring the overall reading level of the survey (7th grade).

14.2.3 Research Methodology

The research methodology component of ❯Table 14.1 includes methods, designs, and the issues involved in the selection of a method and design with regard to a particular research question (e.g., internal and external validity). With respect to our research example, all team members were clear that the research question would not be answerable through an experimental group

design (e.g., a laboratory task examining differential rates of help-seeking behavior by level of PTSD symptomatology). However, beyond this, not all personnel had the training or were at the stage of competence to select, develop, and implement the appropriate research design. For instance, the members of the legislative committee that initiated the request for this research had suggested we complete qualitative interviews with 30–60 veterans. The research team, instead, considered three quantitative approaches to the committee's question: (a) program evaluation (e.g., evaluating specific community resources in terms of access by veterans and service outcomes); (b) epidemiology (e.g., random-digit dialing of persons throughout West Virginia to evaluate mental health status and help-seeking among those who were and were not recently returned veterans); and (c) a direct mail survey to identified veterans (having ruled-out phone, Internet, and other survey methodologies), the method was finally selected.

With the selection of survey methodology, those at the basic level of training should be well familiar with the correlational aspects of these data, be able to do the basic correlation analyses, and should recognize that – due to lack of experimental control – the findings describe relations and not causation. Persons with higher levels of training should be additionally knowledgeable about complex issues that arise within the otherwise deceptively simple survey approach. For instance, it should be recognized that these data were not collected cross-sectionally (e.g., groups at ages 24, 30, 36, 42 years; or groups at 2, 4, 6, or 12 months post-deployment), as they were not gathered at a specific point in the lives of groups of participants. Further, although the participants can be divided into groups based on test scores (e.g., high versus low levels of PTSD symptoms or combat exposure), such a division would not truly represent an *a priori* experimental group or quasi-experimental research design. Thus, the more knowledgeable researcher must be able to use statistical procedures appropriate to the assumptions of the research method and design.

The team members at the highest level of training were not only familiar with the issues of internal and external validity within this study, but could easily identify them, and note these limitations when disseminating the findings. For instance, although all participants were recent military veterans, they were of varying ages (18–56 years), and had different military career paths and experiences, thus making the data vulnerable to the threats of history and maturation. A threat to external validity evident to those with master's- and doctoral-level training is related to participant recruitment. We mailed surveys to all 6,400 veterans available from a list of those who had applied for a US$600 overseas service bonus offered by the State of West Virginia Division of Veterans Affairs (WVDVA). The researcher at the knowledge stage of competency might assume we had thoroughly sampled the population of interest by accessing a large number of WV veterans. Those at a higher stage of competency quickly realized that veterans who had not applied for the bonus were not represented in the survey. This could bias the sample by, perhaps, not including those with higher levels of depression (not sufficiently functional to have applied for the bonus) or a higher income (not sufficiently in need of the bonus).

Highly related to problem conceptualization and the identification of the variables under study, these latter issues bring up the need to fully understand the role of confounding and nuisance variables and to use one's skills to adequately design a study or apply appropriate statistical procedures that control for their effects as much as is possible. It is the perpetual bane of undergraduate students to learn about, and identify, IVs and DVs within a basic experimental design, such as one containing a control group and several levels of an IV (e.g., drug dose, hours of practice). One would not expect students at this level of training to have the skills to design more complex experimental manipulations with appropriate controls (e.g., three levels of

treatment × two levels of symptom severity × four assessment points), nor to know the strengths and limitations of such designs. At the graduate level of training, the student should be able to utilize more complex designs with greater control and be sufficiently familiar with research methodology in order to review and critique published studies and journal manuscript submissions. Within our research team, it was necessary for members to understand that, regardless of the type of analysis and assignment of specific variables to IV or DV status, the results would always remain correlational. Not being experimental research, all variables had equal status, and could easily be interchanged from IV to DV, depending on the question being asked. For example, a linear regression analysis showed that scores on the PCL were predicted by scores on the CESD ($\beta = 0.69$), level of combat exposure ($\beta = 0.23$), and rating of perceived family functioning ($\beta = -0.16$), adjusted $R^2 = .80$, $F(3, 916) = 1203.7$, $p < .001$. However, one can use the same four variables and change the DV from PCL score to rating of perceived family functioning. The result is that family functioning is predicted by PCL score ($\beta = -0.40$), and score on the CESD ($\beta = -0.29$), adjusted $R^2 = .44$, $F(2, 917) = 363.4$, $p < .001$; level of combat exposure does not enter into the model. The well-trained and experienced researcher would be sufficiently familiar with the existing literature and theory, and be able to make decisions regarding the status of any particular variable as an IV, DV, mediator, or moderator, such that the resulting findings contribute meaningful information to the knowledge base.

Additional Foundational Competencies. All team members, regardless of level of training, needed to know and put into practice the ethical requirements for human subject research as specified by professional, state, and national guidelines. All were certified through an online-training and testing process, and the research project, itself, was approved by the local university institutional review board (IRB). Further, being a multidisciplinary team, the specific professional guidelines regarding research differed among the disciplines, with those of the APA (2002) being the most explicitly defined. Additional competencies were evident in the ability of the researchers to build a relationship with the WVDVA that allowed a partnership in distributing surveys to a more diverse community of veterans than would have been possible through the federal VA system.

14.2.4 Core Statistics

Within the area of core statistics are included basic competencies such as probability and distributions, visual (i.e., graphing) and statistical description (e.g., central tendency and variability), basic and advanced inferential statistics (e.g., correlation, *t*-test, ANOVA, regression, and structural equation modeling), and nonparametric approaches (e.g., chi-square, Bayesian distributions, and rank-order tests). Someone at the bachelor's level should be able to use a statistical package to access a data set and provide descriptive statistics and related graphs for key variables, such as gender, age, education, income, etc. At increasing stages of competence, it would be expected that one could identify variables suitable for correlational analyses, group participants according to scores on key measures and perform an ANOVA, and identify (based on informed hypotheses) critical IVs and DVs for regression procedures. Within our study, specific team members with master's and doctoral-level training were able to take total scores on combat exposure, PTSD, and depression, and derive the following correlations ($n = 924$, $p < .001$): $r = .48$ between combat exposure and PTSD, $r = .29$ between combat exposure and depression, and $r = .85$ between PTSD and depression. At this level of training, the research

psychologist should be able to recognize that these correlations suggest a strong comorbidity between PTSD and depression, and that exposure, alone, is not necessarily a predictor of psychopathology. The psychologist with a greater degree of expertise (i.e., higher level of training and stage of competency) would be able to look at the covariance among these three variables and also conduct and interpret regression models that may show the contri-bution of other variables to level of PTSD and depression symptoms, such as age, education, rurality, income, and pre-military functioning. Further, those with higher levels of competency might develop and test these same variables in a path analytic or mediation/moderation model.

Additional Foundational Competencies. Competencies needed in this area in addition to scientific knowledge and methods include reflective practice, and the concept of ethical and legal standards. Although for some members of the team the statistical analysis procedures in the area of core statistics are among the most basic that are learned in undergraduate and graduate training, other members needed to quickly realize they were outside their level of competence. Regardless of the level of competence, one must be aware of, and follow, APA (2002) ethical standards when analyzing and reporting research results (Principle 8.10, APA) in order to avoid making false or deceptive statements (Principle 5.01, APA). Indeed, the team, as a whole, met to discuss the findings to ensure that all members understood the implications of the results, regardless of their knowledge of the statistical procedures utilized. This was done to ensure consistency of reports across multiple venues and so that findings would not be unintentionally misrepresented.

14.2.5 Specialized Statistical Procedures

Our study of returning veterans was a "one-shot" survey. One could easily imagine, however, following a sample of identified veterans over several months to years after their return from combat in order to evaluate physical and mental health and reintegration into the community. Such a study would require competent use with regard to structuring and implementing a longitudinal study, including fixed or variably spaced measurement occasions and multilevel systemic variables (e.g., the veteran, the family, the community), and understanding and using various advanced statistical models to describe change over time (e.g., growth curve modeling, latent growth models; cf. Singer & Willett, 2003). A longitudinal study would allow modeling of the interactions between the changes in the levels of PTSD and the depression symptoms in the veteran and the impact on family interactions and mental health over time, as compared to the static view provided by a single survey. Conduct of a study at this level of sophistication would require one to be at the use stage of competency, which likely would require training at the doctoral and postdoctoral levels. Bachelor-level students should know the basics of a longitudinal design, as compared, say, to a cross-sectional design. Graduate students should be able to more fully describe such designs, know their strengths and limitations, and be able to conduct related statistical analyses. They might, during their limited time as graduate students, be able to conduct a repeated measures or cross-sectional study, but time constraints would likely prevent conducting an extended longitudinal study. Coming full circle, bachelor-level and graduate students might function as research assistants on a longitudinal study, thereby enhancing their competency beyond that typically associated with level of training.

A research study of any type, be it a controlled laboratory study, a one-time survey, or more advanced designs, will, inevitably, have missing data. As noted by Aiken et al. (2008), two

thirds of the doctoral programs in their survey fail to provide any coverage of modern missing data treatments in their curricula. It follows, then, that most graduate-level students will not even be at the competency stage of knowledge and familiarity with such topics, and few will be competent in the use of such techniques. In the present study, with knowledge of the related limitations, we handled missing data via modal imputation. We were not sufficiently competent in the use of modern regression techniques for missing data, but we did know the method of imputation appropriate to the scales in the survey (i.e., mean imputation not being appropriate for ordinal data).

Those psychological researchers at doctoral and postdoctoral levels of training may be familiar with other concepts, such as bootstrapping and resampling (which can be computer-intensive procedures), but may not be competent in their use or be using them in their research products that contribute to the knowledge base. With a data set such as being discussed here, one would not typically conduct and report the outcomes of bootstrapping or resampling. However, such procedures can, and perhaps should be done to both avoid over-fitting a model and to add confidence in the characteristics of a sample (Tabachnick & Fidell, 2007). In doing a resampling procedure with our data set (taking four random samples of 250 out of 1,000 surveys), we found that the correlations among key variables were consistent across the samples. To illustrate the previously reported correlation between PCL and CESD scores ($r = .85$) for all 1,000 surveys, correlations between these variables only varied from 0.83 to 0.88 in the four random samples, lending confidence to the original estimate.

Additional Foundational Competencies. As under *Core Statistics*, competencies needed in this area in addition to scientific knowledge and methods include reflective practice and ethical and legal standards; we also note here a foundational competency in interdisciplinary systems. Because our research team was only at the stage of familiarity with modern methods of treating missing data, it was imperative that we assessed ourselves and used reflective practice. Attempting to use complex missing data procedures despite a lack of competency could result in the misrepresentation of our data, and potentially negatively affect our population base (veterans) through incorrect conclusions about their status and needs. Again, adherence to APA (2002) ethical standards when analyzing and reporting research results is critical. Lastly, in order to become familiar with and competently utilize advanced and specialized statistics, it is likely to be necessary to cross interdisciplinary lines and receive assistance and continuing education from researchers from other disciplines, including statistics and mathematics, sociology, and epidemiology.

14.2.6 Data Management

Within the area of data management are the topics of data entry, data recoding, data security, and data access, the details of which are typically learned at different levels of training. Data-entry skills are generally introduced to undergraduate students through course work or supervised research experiences. These students would be expected to be familiar with the procedures for creating a simple database using basic spreadsheet software. Some may be able, with guidance and a template, to use those skills to create a database with a specific statistical software package (e.g., SPSS, SAS). Master-level students would be expected to perform these tasks independently. In our study, trained undergraduate students entered survey data into a data

base that had been created, under supervision, by a senior undergraduate student who had several years of experience with the research group. Those students also learned how to "clean" the completed data set by checking that entered values were not outside the specified range for each variable, and by reentering a portion of the data to do a check on the accuracy of entry. It is interesting to note that recent versions of some statistical software packages (e.g., SPSS) now incorporate rather elaborate data checking and validation procedures. More advanced skills within data management, such as data recoding (e.g., recoding reverse-scored survey items), transformations (e.g., log transforms and other metrics), or imputation (including multiple imputation, cf. Rubin, 1987), typically are not introduced until graduate school. However, we again emphasize that increasing one's competency in any area is not dependent simply on progressing through the levels of academic training.

The topics of retention of research data and records, security, and sharing of data sets are probably only familiar to undergraduate students and even most graduate students, in terms of knowing and following IRB and HIPPA rules and regulations concerning privacy issues. They hopefully know to keep research records under lock and key (i.e., locked cabinets in locked rooms). The use of computers in research for data collection, storage, and analysis adds further security issues, especially when they are connected to the Internet. Researchers at all levels need to follow guidelines concerning records on Internet-enabled computers, and the use of passwords and encryption. Training, be it through academic programs or external sources (i.e., continuing education and ethics workshops), should bring all researchers – regardless of educational degree – to the stage of competence in which they know and follow basic privacy and security rules.

Beyond these important issues are those of data and record retention, and levels of access to research records. The Council on Governmental Relations (2006), which sets the rules for multiple governmental agencies (such as National Institute of Health [NIH] and National Institute of Mental Health [NIMH]), requires that data and research records to be retained for a minimum of 3 years. Local agencies and IRBs may require longer periods of retention, and journals may require additional periods of retention after publication. Further, granting agencies are requiring grantees to ensure accessibility of research records, including the posting of data through data-sharing portals. Even the Council of Science Editors (2009) recommends that the data sets should be available as part of the peer-review process (cf. Principle 8.14; APA, 2002). In short, there are increasing requirements on retention and access to which the present authors know many colleagues do not well adhere. Access to research records allows the scientific method to be truly self-correcting and also acts to discourage the possible reporting of fraudulent results. One of us (Joseph Scotti), for his part, has yet to destroy a single research record in his 30-year career; this well illustrates the storage problem that arises as a result of data retention and access requirements unless original data and records are converted to various electronic formats.

Additional Foundational Competencies. Competencies in the area of ethical and legal standards are well addressed above, particularly with regard to needing to be familiar with, and adhering to, local, state, professional, and federal standards. Data sharing, which is becoming the standard, especially for larger federal grants, is an important competency in both scientific knowledge and interdisciplinary systems, in that one is opening their data set to scrutiny and reanalyses by professionals in psychology and related fields. This process has the potential to generate information from existing data that the original authors did not examine and to build cross-disciplinary research.

14.2.7 Communication of Findings

Finally, one's completed research does not directly contribute to the field until the findings are communicated in some format, such as colloquia, conference posters and papers, theses and dissertations, grant and technical reports, Internet and electronic distribution, and book and journal publications. This represents the competency of dissemination, which includes release of findings through the sources previously listed, as well as being among the gate-keepers of which findings are published or not and the quality of the outlet. Thus, we have issues of authorship (Principle 8.12; APA, 2002), originality, avoidance of plagiarism, and the submission and peer-review process. Researchers reaching the stage of contribution, that is, who are publishing research that adds to the knowledge base, are among those who can become reviewers of the work of their peers. This may take the form of reviewing grant applications submitted to local, state, or federal agencies; or reviewing manuscripts submitted for publication in professional journals; and even being among those who set policies for the types of papers or grants that a journal or agency is seeking. These activities intersect with level of training, in that a typical undergraduate student might be fortunate to have their participation in a project recognized by a poster authorship. Graduate students are likely to present their thesis and dissertation research at conferences and may attempt to publish these products, while likely coauthoring works with their faculty mentors. Researchers at the doctoral and postdoctoral levels will be contributing to the general research knowledge base in their field of study. This reflects what Kuhn (1996) refers to as *normal science*, and does not necessarily generate new theories or directions; rather, it adds to the exploration of a restricted paradigm without expanding its boundaries or generating new paradigms. Individuals at the highest stage of competency, however, will be able to disseminate research of increasing sophistication, developing new theoretical, methodological, and statistical models that can then be utilized in normal science.

The example study falls into the category of normal science. The lead researcher has communicated the original findings of the group through the mediums of conference presentations, state and federal government testimony, and submission of manuscripts to peer-reviewed professional journals. Undergraduate students in the lab were able to attend a professional conference and assist in presenting the findings, while being recognized for their participation as poster coauthors. Graduate student members of the research lab are identifying and presenting additional findings, beyond the primary goals of the initial project.

For manuscripts or grants to be effectively disseminated, they must be written in a clear, unbiased manner and follow professional standards for language and format. In the field of psychology, writers must use APA style (APA, 2001) when communicating any piece of written work. Psychology majors in the field begin to be familiar with the basic standards early in their undergraduate careers, as papers and essays should require practice of the basics of APA style. As one moves on in their professional career, he or she should become able to use the APA manual independently in all of their professional writing. Further, at higher levels of training, one should be able recognize potential biases of his or her own work and actively avoid biases affecting the communication of findings. In our study, we have been particularly interested in rural veterans; as such, a possible oversight or bias could be an undue focus on the characteristics of rural areas as the major determinant of post-military reintegration.

Additional Foundational Competencies. Communicating research findings and implications across interdisciplinary boundaries is a good professional practice, both in the sense of promoting one's work and informing professionals in intersecting disciplines of work that they

might not otherwise be aware. Cross-fertilization pushes the boundaries of the established paradigms. We presented our psychological research on PTSD in groups of veterans to social work and rural health organizations. These professionals challenged us to think beyond the impact of trauma on an individual and their immediate family, and consider the broader impact on communities (e.g., loss of workers, drain on resources) and helping agencies (e.g., lack of awareness among primary care providers of PTSD symptoms and referral sources).

Additional ethical standards in communicating findings include reporting aggregate data to keep the identity of research participants confidential. Further, in case reports or qualitative investigations, extra care must be taken to guarantee this ethical standard, as a great amount of individual information is typically provided in these reports. One would have to ensure that no identifiable information (e.g., reporting minority status in a city with very few minorities) is reported.

14.3 Summary

14.3.1 Competence in the Training and Practice of Clinical Psychologists

We have presented an elaboration of the Competency Cube model of Rodolfa et al. (2005) by broadening the levels of training being considered and introducing the concept of the stage of competency (knowledge, use, and contribution). We linked the resulting model to specific research and statistical and data analysis skills that should be acquired at different levels of training. Noted again, however, is the point that skill acquisition is not fully dependent on the linear progression through academic degrees, nor does the notion of acquisition ensure competency in terms of *use* and *contribution*. Readers may – and even should – disagree with the specific skills that we have included in ❯ Table 14.1, and with the points in training at which these skills should be acquired. ❯ Table 14.1 is offered as a starting point; it is an empirical question as to when these skills are actually being taught throughout colleges and universities, and when and in what sequence they would best be learned. An initial question to ask at this point is whether the current system is "broken," or are we actually producing graduates who are competent in research skills? If they are competent, we might assume the current system is working pretty well in terms of sequence and timing of teaching research skills.

Fortunately, this question is well addressed by Aiken et al. (2008) in their survey of Ph.D. programs in psychology. Their findings are, in our view, disheartening; they go as far as saying they are "profoundly troubled" by their results. One troubling finding is that training in psychological statistics, measurement, and methodology appears to be no better at the top 25 psychology programs in the country than at lesser-ranked departments. This lack of a difference is due to a demonstrated deficiency in the coverage of specific topics and the judged competence of graduates across the 201 programs in their survey. For example, the Aiken et al. (2008) survey shows that while most programs report coverage of core statistical analysis procedures, such as ANOVA (95%), multiple regression (95%), and multivariate analysis (80%), coverage of more specialized content quickly declines as one moves to structural equation modeling (52%), nonparametric statistics (50%), longitudinal data analysis (30%), and treatment of missing data (24%). Similarly, while basic research designs are covered in most programs (92%), survey research, program evaluation, and survey sampling procedures are

covered in less than one third of the programs. More troubling is the low percentage of programs that report that *most or all of their graduates* (≥75%) are competent in applying a wide variety of critical skills to their own research (Aiken et al., 2008). For example, only 30% of the programs reported most or all of their graduates as being competent to apply classical test theory. Figures for some other important areas are: 46% for field research, 11% for longitudinal designs, 10% for program evaluation, 9% for generalizability theory, 8% for single-subject designs, and less than 7% for a variety of missing data approaches.

Recommended curricular coverage exists for undergraduate psychology programs (APA, 2007, 2008b), and even for high schools (APA, 2005). Surveys have been done to document adherence to recommended research and statistical analysis coursework and experiences at the undergraduate level (Friedrich, Buday, & Kerr, 2000; Tomcho et al., 2009). These surveys have generally found undergraduate curricula to have low – even poor – adherence to the 18 undergraduate learning objectives related to methodology and statistics as outlined by the APA (2007; Tomcho et al.). We located one older study evaluating student competence in research design and data analysis at the master's level of training in counseling psychology (Watkins, Schneider, Manus, & Hunton-Shoup, 1990). Similar to the later work of Aiken et al. (2008), Watkins et al. found that the master's program faculty rated their graduates rather low (using a nine-point scale, where 1 = *very little* and 9 = *very much*), especially as contrasted with the comparison group of doctoral programs in their study, on: (a) having been effectively trained in certain areas, and (b) having an interest in certain areas. For example, training and interest in test construction received mean scores of 4.1 and 2.7, respectively. Also relevant here are the respective ratings for independent research in counseling (M = 5.4 and 4.4) and program evaluation (M = 4.2 and 3.9). Finally, on the same nine-point scale, faculty rated their master's-level graduates as having low interest in contributing to the literature (M = 3.6). We did not find any studies evaluating competence in research design and data analysis related to continuing education experiences following one's terminal degree. Whether and to what effect clinicians and researchers continue to develop their skills and competencies in research design and statistical analysis seems like a promising avenue for investigation, but one likely to be equally unsettling, to say the least. A related issue goes beyond when, and in what sequence, these skills should be acquired: There is no consensus on which skills should be presented at what point in training and to what stage of competency.

Further, there is no consensus on how to evaluate or measure stage of competency in these various skills (Elman, Illfelder-Kaye, & Robiner, 2005; Leigh et al., 2007; Lichtenberg, 2007; Roberts, Borden, Christiansen, & Lopez, 2005; Rodolfa et al., 2005). We would argue that evaluation should depend on the particular stage of competence being measured (knowledge, use, contribution), as well as the context in which a particular skill is being learned (undergraduate versus graduate school versus continuing education seminar) and used (to pass a course versus to earn a doctorate versus to publish a research article). This does not presently appear to be the case. For example, undergraduate psychology majors will need to demonstrate knowledge of, and familiarity with, core statistical issues and procedures, such as probability, random group assignment, correlation, *t*-test, and ANOVA, primarily through written examination, including hand calculations and laboratory reports. This method does not evaluate the ability to apply this knowledge independently, raising the question of whether *use* of these skills is actually more than just a *desired* outcome of the undergraduate degree. Likewise, the primary demonstration of research competence for entering most graduate programs is the knowledge needed to pass the psychology subject test and the quantitative component of the

Graduate Record Examination. One could argue that an applicant's portfolio should include documentation of involvement in research, and interviewers may ask about research experience and knowledge. No interviewee, we imagine, is handed a data set and asked to complete a *t*-test as evidence of independent use. Further, and as clearly supported by the research of Aiken et al. (2008), even doctoral-level students largely demonstrate only the knowledge and familiarity stage of competence through course examination. Although they should be progressing toward independent use by the time of completion of their theses and dissertations, the measurement of this outcome is the vague and unstandardized "committee consensus" as to whether or not the student has demonstrated competence. We question whether the competence to apply these skills *independently* is actually being evaluated, and whether independent use is a *functional* outcome of the doctoral degree. In the same vein, professional licensing exams are written demonstrations of knowledge, and not of competence to use or contribute. Further, licensing exams are focused on clinical issues; the research design and statistical analysis questions are at a rather basic level of knowledge.

As clinical psychologists are the primary group who must pass credentialing examinations, one may ask how important research design and statistical analysis are to clinical practice if only demonstration of knowledge and familiarity are required. We would argue that the well-trained clinician *must* be familiar with a range of research design and statistical analysis procedures. This will enable the clinician to be an informed consumer of the research literature on effective intervention and assessment strategies, thereby making judgments about the quality of supporting research. Evidence-based practice requires good evaluation. To engage in evaluation-informed practice (cf., Bloom, Fischer, & Orme, 2009), the clinician should be familiar with a range of ideographic and nomothetic assessment procedures, single-subject research designs, and the ability to construct reliable and valid measures and observational procedures. This active use of research design and analysis skills will assist in determining the success or failure of interventions. Although the gateway to licensed practice is demonstration of knowledge and familiarity, the competent clinician must be a demonstrably competent user of these skills. However, competent *use* is not presently a component of licensure.

One may argue that the clinician needs only to be familiar with core design and analysis procedures, and competent in the use of methods that adequately demonstrate that interventions are working. Such adequate demonstrations are for the purpose of feedback to clients, adjusting intervention components, and documenting progress for insurance companies. This need not be documentation at the level of publishable clinical research. Still, how will the clinician who reads books and journals and attends continuing education workshops separate adequate from inadequate research on promising interventions and assessments? The practicing clinician need not be a demonstrated expert in randomized clinical trials and specialized statistical procedures, but she or he should be sufficiently familiar to make an informed decision about such research without relying completely on the opinion of "experts" (who may not themselves be as competent in research as might be generally assumed).

Looking back at the veterans research study presented earlier in the chapter, the practicing clinician should be able to use their knowledge of research design and statistical analysis to evaluate and question the overall study and what information should be taken as useful in her or his clinical practice. Although a strength of the study is the inclusion of help-seeking and non-help-seeking veterans, the clinician may be more interested in the help-seekers as they are the ones most likely to present themselves to the clinician for assistance. The clinician should be able to evaluate the adequacy of the psychometrics of the primary measures, and recognize

the potential difficulties with author-developed measures. Knowledge of the limitations of survey research, cross-sectional versus longitudinal designs, and anonymous self-report data are also needed. Consumers of research should also be familiar with issues of effect sizes versus the historical standard of reporting significance levels (*p* values; Grissom & Kim, 2005), and whether one can generalize from a particular study to the context in which one practices. This is of particular importance in the dissemination of empirically supported treatments and empirically based professional practices.

On the other hand, perhaps, Goldfried and Wolfe (1998) stated: "It is unrealistic to expect that the practicing clinician will be in the position to evaluate the methodological adequacy of our research findings; nor are they interested in doing so" (p. 149). This is a statement that we do find "profoundly troubling." The implication here is that graduates of doctoral programs do not have sufficient research skills to evaluate published research. Other sources also suggest that, indeed, clinicians are not interested in doing so (see Cohen, 1979; cf. Nathan, 2000). Never mind the issue of whether research is even *read*, a debate between Persons and Silberschatz (1998) raises (and does not settle) the question of whether the results of randomized controlled trials (RCTs) are even *useful* to practicing clinicians. Whether or not clinicians can read and understand the research, perhaps the research is simply not relevant to daily practice; thus the importance of moving from RCTs to empirically supported treatments to empirically based professional practices. However, we do not know if the latter are being read or used, either.

The movement toward establishing evaluations of competence at the level of use is a complex issue well beyond the scope of this chapter. A series of articles in *Professional Psychology: Research and Practice* well address the multiple challenges. First, among these, is developing adequate, valid, and feasible demonstrations of the competence to use a range of research design and statistical analysis procedures. Leigh et al. (2007) and Lichtenberg et al. (2007) focus on these issues with regard to professional psychology, largely meaning the practice of psychology with clinical populations. The issues, however, are equally relevant to the multiple disciplines of psychology, from applied clinical research to experimental psychopathology research to basic animal laboratory research, and from the study of populations and cultures to social behavior to normal and abnormal behavior and personality. Although these volumes focus on clinical psychology competencies, we should be evaluating *all* psychologists at *all* levels of training at a higher level than knowledge and familiarity with their subject matter.

14.3.2 Competence in the Training and Practice of Research Psychologists

We feel that research psychologists must be held to a different, one may say higher, standard of research competence than applied clinical psychologists, in general. ❯Table 14.1 reflects this perspective by rating the expected level of competence for nearly all research and design skills as 3 (competent in *use to contribution*) for those with a research career path. In contrast to this, our ratings for those on the clinical career path reflect our hope that they at least maintain the skills acquired in graduate school, rather than acquiring additional research skills. Oddly, the clinical psychologist takes a licensing exam that includes some basic research design and statistics questions; the research psychologist is not similarly "certified." For most clinical psychology positions licensure to practice is a requirement for being hired (such as university faculty).

This is not the case where research is the required focus of the job. Instead, employers rely on academic degrees, vitae, and professional references to document expertise in research design and statistical analysis. We were unable to locate any professional organization (other than academic programs) that provides certification of expertise in this area, including the American Board of Professional Psychology and the APA College of Professional Psychology (both of which, admittedly, are clinical-/applied-oriented), and also relevant APA Divisions and related Societies. Interestingly, the National Association of School Psychologists (2003) gives credit toward certification renewal (75 h of professional development over 3 years) for publication of research and for the hours of participation in a research project (up to 25 h per project).

So, how does one document competence in research at the level of use and contribution? Currently, one does so by successful submission to research grant agencies and research journals, both of which have statistical and research design experts on their review boards. Of course, those who become members of these review boards arrived there by having their own successful history of publication and receipt of grants under similar review requirements. The assumption is that the published researcher understands the design and statistics in their study, so much so that they could critique the work of others. However, a researcher might simply be the head of a team of associates who actually conduct the design and analysis components of the research. The automatic assumption of competence to review the work of others may thus be faulty. Although this bootstrapping approach has generally served us well, it may be time to document competence in design and analysis through more empirical means. This would include an objective examination of knowledge, but should be extended to demonstration of design and analysis skills with a prepared data set or identification of flaws and inconsistencies in a prototypical manuscript. Thus, actual skills would be demonstrated and criteria for serving on review boards could be set. We know from experience as journal manuscript reviewers that all reviewers are not equally knowledgeable about research design and statistical analysis issues. Documentation of competence would reduce this knowledge differential and avoid the not uncommon experience of one reviewer finding multiple design and analysis flaws, while another reviewer finds no problem at all. The importance of documenting research competencies beyond the ability to obtain grants and publish papers lies in the establishment of criteria of excellence that should raise the overall quality of both conducting and teaching about research. Presently, at our colleges and universities, we rely on academic degrees and curriculum vitae as documentation of expertise. This may no longer be sufficient. (In fact, it is *not* sufficient: One of us recently asked a biostatistician with a quantitative psychology doctoral degree to conduct a power analysis for a research grant application, that person could not do it.)

Developing a system of documentation of knowledge, skills, and performance indicators for certifying competence as a research psychologist would bring with it the requirement of continuing to enhance one's skills. Just as clinical psychologists are required to obtain continuing education units to maintain licensure, a similar system could be put into place for professional development and research skills. This may not be practical in the short run for the field as a whole, but could initially be developed to recognize expertise in just the same way that diplomat status is awarded in the clinical arena. Such a system would assist in the hiring of research faculty and provide assurance that consulting research psychologists and biostatisticians are, indeed, competent in their advertised skills.

An overarching problem of research psychology in general is that the number of individuals graduating with a focus on quantitative psychology is declining, as documented by Aiken et al. (2008). These authors discuss both the decline in the number of students focusing in the

quantitative area, as well as the number of programs, both having decreased by about half over a 10-year period. In fact, APA has a task force to increase the number of quantitative psychologists (APA, 2008a, 2009). Their data show three to eight times as many job advertisements per available candidate in quantitative psychology versus other major areas (e.g., cognitive, developmental, or social positions). This is important because if we are to increase the rigor with which we train graduate students in research design and statistical analysis, we will need faculty to do so. Aiken et al. (2008) report that 16% of the psychology department faculty teach statistics, research design, or measurement, with the majority of those faculty having been trained in a substantive area other than quantitative methods. Only half of all programs had at least one quantitative psychologist on faculty. We cannot count on faculty to teach their substantive area and be expert instructors in research design and analysis as well, particularly as the competency movement is fast spreading across all areas of psychology, placing greater demand on all.

14.4 Conclusion

The prior section brings us back to the question of whether psychology is a science. If we are, or are seeking to be, we need the expertise in research design and statistical analysis that will support that science. The foregoing discussion suggests that the field is in difficult straits. We have a weak system for evaluating the research design and statistical analysis competencies of graduates at all levels. The system primarily focuses on tests that demonstrate knowledge rather than use. Aiken et al. (2008) have well documented that doctoral programs are not up to date in the quantitative skills that they teach, and they provide low ratings for how competent they feel their own graduates are in independently utilizing these skills. Clinical psychologists appear not to be keeping up with the research base in an era when it has become increasingly important to use empirically (i.e., research) supported treatments. Unless the goal is for clinical psychologists simply to become technicians who follow intervention manuals, we must ensure they remain skilled at reading and interpreting the research literature and understanding the conceptual and theoretical bases for interventions – even manualized ones. Finally, quantitative psychologists, who should function to support the training needs and scientific goals of the field, are in increasingly short supply.

To remedy this difficult situation, we recommend turning to the Competency Cube, as developed by Rodolfa et al. (2005), and elaborated here. Our table of skills provides the functional competencies that psychologists at various levels of training, degrees, and career paths should acquire through lifelong learning. Likewise, the foundational competencies outlined by Rodolfa et al. are critical to the development of the functional competencies and should similarly be acquired and developed over one's career.

Careers. This brings us to a reflection on the research careers of the authors themselves. Author Stanley Cohen is the only true quantitative psychologist amongst us. He and the other senior (read "older") author (Joseph Scotti) were trained at a time where all statistical analyses were done by hand with, perhaps, the assistance of a slide rule or a 60-pound "desktop" *calculator*. This necessarily limited the ability to do the advanced statistical analyses that are now commonly available at the click of a virtual button through software programs such as SPSS and SAS. As such, we maintain an appropriate suspicion of what is actually going on "behind the curtain" when selecting analyses by clicking boxes. Our junior author (Vanessa Jacoby) is being trained in the "clicky-box era" (Kaschak & Moore, 2000), finding hand calculations

helpful in learning the conceptual aspects of simple analyses, while deeply appreciative of the availability of desktop *computing*. Authors Stanley Cohen, Joseph Scotti, and Julie Hicks Patrick are lifelong learners of research design and statistical analysis, keeping up with books and journals and attending specialized methodology workshops. Thus, their skills have been acquired over decades of learning, teaching, and using. Author Joseph Scotti notes that attendance of specialty workshops and conferences (e.g., *Conference on Innovative Trauma Research Methods;* Sonis, Palmieri, Lauterbach, King, & King, 2008) has not only sharpened and developed research and design skills more commonly used within psychological research, but have helped him learn designs outside of the field of psychology that can be brought into the next generation of psychological research, such as multilevel ecological models for understanding the social, geographic, and other contexts within which various samples of participants are functioning (Kawachi & Subramanian, 2006).

Author Vanessa Jacoby, on the other hand, is in the midst of a steep learning curve as a first-year doctoral student, coming out of the undergraduate research and statistics curriculum and into three graduate courses in research design and statistics, classical test theory, and generalizability theory. Her knowledge is being quickly brought up to the stage of semi-independent use in the design of a thesis research project. The careers of incoming graduate students are likely to be more similar to the experience of Vanessa Jacoby than to that of the other authors, given the explosion of statistical analysis procedures and research designs that increasingly sophisticated software programs allow. We hope this new generation continues lifelong learning in their development of functional and foundational competencies.

Final thoughts. Are we asking too much? Clinical psychologists need to be competent in their substantive areas of focus, being well acquainted with the knowledge base in their areas of interest. As practicing clinicians, they must also be competent in the skills needed to provide effective consultation and intervention. Must they also remain expert enough in research design and data analysis to evaluate *critically* the literature that recommends to them the use of specific intervention and consultation procedures? If they are to be more than technicians, we emphatically say, "*Yes, of course! Being conversant in the scientific bases of psychology is the very heart of a doctoral degree.*"

How we are to evaluate such competencies in research design and statistical analysis remains an open question. However, any movement beyond the status quo will take a major culture shift in the education and training of professional psychologists (Roberts et al., 2005). This shift in ensuring the competencies in research design and statistical analysis is occurring concurrent with a similar shift that is being recommended in the clinical training aspects of professional psychologists, as witness the other volumes of this series. Clearly, there is much work and clarification ahead before a major impact on the current system of education and training of psychologists occurs. We hope that this chapter adds to the growing base upon which to build this new structure for the field.

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15 Single Subject Research

Kurt A. Freeman · May Lim

Abstract: In this chapter, we describe basic and expert competencies for the use of single subject designs. Basic competencies include repeated observation of behavioral phenomenon of interest, the participant serving as his or her own control, and utilizing measurement and visual analysis strategies that allow one to determine whether change occurs over time. Expert competencies include basic competencies plus repeated demonstration of experimental effect and altering only one variable at a time when introducing treatment. Through the use of numerous examples, we illustrate how single subject research designs lend themselves well to various aspects of research, including the stage of theory development (Level 1 research) and more formal and systematic tests of said theories (Level II and Level III research). We also describe how basic and expert competencies of single subject designs can be incorporated into clinical practice to evaluate effects of intervention. The reader will learn how single subject designs are unique approaches to scientific inquiry due to several features, including repeated observation of the dependent variable(s), replication of treatment effects, intrasubject and intersubject comparisons, visual analysis of individual participant data, and systematic manipulation of independent variable(s). This chapter will likely be useful for clinicians and researchers alike who are interested in answering questions about clinical phenomena in a manner that meets the requirements of the scientific method.

15.1 Overview

As evidenced by the adoption of the scientist-practitioner or local clinical-scientist models by graduate programs in clinical and counseling psychology, it is clear that the role of research is vital in graduate training. Thus, whether planning a career as a researcher or practitioner, graduate students are expected to gain an understanding of, and an appreciation for, research methodology. This chapter focuses on single-subject designs (SSDs), an idiographic approach for describing, examining, and comparing the performance of an individual against his or her own performance at different points in time or in different settings (Blampied, 2001; Leary, 2001). An introduction to the various SSDs is provided in terms of the processes involved in their utilization, as well as the benefits and weaknesses of each are provided. Clinical examples are used to illustrate the basic competencies needed to effectively apply SSD strategies in the clinical realm. This chapter also includes a discussion of the expert competencies related to SSDs in the context of psychological research that forwards our understanding of the human behavior and the treatment of problems that arise.

While training in various research methodologies is a standard course in doctoral-level psychology programs, many graduates who chose to work primarily as clinical practitioners rarely apply rigorous research methodologies in their clinical work (Holttum & Goble, 2006; Phelps, Eisman, & Kohout, 1998). Therefore, we aim to demonstrate that single-subject methodologies are useful for the clinician interested in creating and

documenting behavioral change for a given client without aspirations for contributing the scientific literature as well as for the social scientist interested in systematic research approaches.

To demonstrate how SSDs can be applicable across research and clinical contexts, we review how they can be applied at various levels of research (i.e., Levels I, II, and III; Hawkins & Mathews, 1999). Level I research typically is a less systematic approach to research that usually requires nothing more than what Hawkins and Mathews identify as "continuous" data collection. Emphasis is on demonstrating change and not on empirically verifying the specific elements that led to the change. Level II research is mostly concerned with the semi-scientific evaluation of treatments. This type of research focuses on experimental control, systematic application of the dependent variable (DV) on the independent variable (IV), and constant monitoring of the data. In short, Level II research also emphasizes behavioral change and experimental control, usually reflected in the documentation of data at pre- and post-phases of treatment, but without a need for replication of treatment effects. Finally, Level III research includes all the activities related to Level II research with the additional aim of identifying replication and generalizability of treatment effects.

15.2 Basic Competencies

15.2.1 Characteristics of Single-Subject Designs

In order to appreciate the complexity and utility of the various single-subject designs, their fundamental premises and characteristics are reviewed in the following sections. The following basic competencies associated with SSDs reflect the specific skills needed to conduct Level I type research (Hawkins & Mathews, 1999). The basic SSD skills associated with Level I research call for a higher level of detail than often used by most clinicians. Inherent in SSDs are organized and unique skill sets useful for practitioners because they aid in case conceptualization and allow the clinician's assumptions to be more precise by converting them into testable hypotheses. We propose that the fundamental characteristics of SSD at all levels of research can be very useful for practitioners because of the emphasis on specificity with regard to measurement and goals.

15.2.1.1 Repeated Observation of Phenomena of Interest

SSDs involve repeated observation of the phenomena of interest across time under standard conditions (Holcombe, Wolery, & Gast, 1994). Specifically, measurement of the DV occurs multiple times, across at least two separate conditions, usually referred to as *baseline* and *intervention*. Such a method of data collection is based on the perspective that determining whether the DV differs from one condition to the next in a meaningful way requires multiple data points within each condition. Doing so allows one to investigate if desired trends in the data are evident (see "Visual Inspection" section below) and protects against making assumptions about differences that may be spurious or the result of natural variation in the DV of interest.

Often in research, the dependent measure utilized is some form of observable behavioral phenomena (e.g., aggressive behavior of a young child, out-of-seat behavior of a child with Attention-Deficit/Hyperactivity Disorder, duration of crying by a depressed adolescent). However, there is nothing inherent within the SSDs that require the DV to be of such form. End products (e.g., weekly weight loss for overweight children), scores on questionnaires (e.g., obtained scores on the *Children's Depression Inventory*), or subjective ratings (e.g., measurements of anxiety using the Subjective Units of Distress Scale) could be repeatedly obtained within SSD research or in application of the principles of SSDs to clinical practice, allowing for inferences regarding the impact of the IV on measures of outcome. In fact, multiple examples abound regarding the use of various types of dependent measures within a single-subject research paradigm (e.g., Glicksohn, Gvirtsman, & Offer, 1997; Nugent, 1992).

In clinical practice, repeated observation can serve as an important role in the therapeutic process. Specifically, if data are gathered in a systematic and repeated manner, decisions can be made regarding: (a) the impact of treatment and (b) whether to alter interventions when monitoring suggests a lack of progress. How one goes about making changes in clinical interventions will determine whether the practitioner adheres to methods that retain sufficient experimental rigor so as to empirically demonstrate causal relations between changes in the DV and IV(s). However, because the goal of most clinical endeavors is not to demonstrate experimental control, but rather is to document change in the clinical phenomena of interest, any deviations from scientifically rigorous approaches may be less important than when engaged in research practices.

15.2.1.2 Participants as Their Own Experimental Controls

Similar to what occurs in within-subjects group designs, participants serve as their own controls in SSDs. The main analytic process used to determine experimental control involves comparing an individual's behavior across experimental conditions, rather than comparing across individuals. This is viewed as the relevant comparison, because in the naturalistic world, and certainly in the context of clinical practice, the primary question of interest is whether an individual's behavior has changed as a result of treatment relative to pretreatment behavioral presentation (Morgan & Morgan, 2001). For instance, a child psychologist is more concerned with whether depressive symptoms of an adolescent have changed as a result of therapy relative to pre-intervention level of symptoms rather than whether the client's symptoms changed relative to a statistically derived group mean. Note that intrasubject comparison across experimental conditions as a test of the effect of the IV on the symptoms of interest is different from completing a normative assessment (i.e., comparing a particular individual's performance or behavioral level to normative data) to determine if a person's current level of functioning is within normal limits. This latter practice is often an important issue clinically, and has some relevance to determining whether changes observed are clinically significant or meaningful (Atkins, Bedics, McGlinchey, & Beauchaine, 2005).

15.2.1.3 Measurement and Analysis

Now that the two of the fundamental characteristics of SSDs necessary for their implementation within Level I research have been presented, the discussion is extended to issues related to

basic measurement competencies when applying SSDs. We review basic competencies such as measuring behavioral characteristics of interest, evaluating baseline data patterns so as to make decisions regarding when to implement treatment, and methods for introducing the IV to allow for an evaluation of treatment effects.

Measurement Strategies

Critical to using SSDs within clinical practice and research is defining in clear terms the target phenomena of interest and developing methods to systematically track those events. The goal is to develop a definition that allows for repeated and reliable documentation of the target variables of interest over time. As mentioned earlier, there is nothing inherent in the use of SSDs that demands one to measure actual behavioral events. Rather the point here is that whatever the DV, be it aggressive acts or scores on a standardized rating scale, defining the variable in a manner that allows for objective, repeated measurement is critical.

As with defining clear DVs, it is necessary to create a clear operational definition of IVs so that one can ensure implementation of treatment with high fidelity. Consider an example of a parent attempting to increase a child's ability to play quietly by him/herself. Using this example, perhaps the IV is the access to a preferred activity (e.g., play with father) contingent upon a specified duration of "playing by self."

This approach to specificity with both the DVs and IVs essentially reflects a focused and consistent effort to understanding the relationship between two events. There is tremendous value in specifying the particular behaviors that need to be learned, increased in frequency, or decreased in frequency. This approach will yield a better chance of identifying a clearer relationship between the IV and DV as compared to an unfocused or shifting approach (Hawkins & Mathews, 1999). Once phenomena of interest have been identified the next step is to choose the measurement method that is most appropriate for capturing important dimensions of those phenomena. Various methods of recording behavioral targets that are commonly used in SSD research are reviewed below.

Time-based methods. Three time-based methods of measurement are commonly used in social science research. Duration as a measure, which is simply a documentation of the length of time that a behavior occurs (e.g., seconds, minutes, hours of continuous behavioral occurrence), is well suited for target behaviors involving sustained performance. For example, a parent concerned about the length, but not the frequency, of his or her daughter's tantrums may measure the duration of each tantrum using a simple stop watch. Duration can be used to track variables of interest that are either targeted for increase (e.g., length of time staying calm or playing quietly) or decrease (e.g., length of child's tantrums, arguments between parent and adolescent, amount of time spent in bed by patient with depression).

Latency refers to the time taken for a behavior to occur following a specified antecedent or cue or the time between the identified cue and the completion of a task. For example, a parent may want to determine the length of time it takes for a child to begin getting ready in the morning following a verbal reminder or the caregiver may be interested in the time between the verbal reminder and completion of the morning routine.

Inter-response latency refers to the passage of time between two contiguous occurrences of a target behavior. For example, a teacher concerned about how frequently a child asks for help may measure the length of time between each instance of the child is raising his or her

hand. Or, a couple with frequent arguments may wish to track the amount of time that passes between arguments using a dimension of time that is most appropriate (e.g., minutes, hours, days) to determine whether the couple's oriented therapy increases inter-response latency.

Event-based methods. Event-based recording methods involve simply tallying the occurrence of a specified discrete behavioral event. Determining frequency of a specified behavior is the simplest form of event-based measurement. Determination of the rate of behavior (i.e., frequency divided by some unit of time) is used more often, however. Event-based recording methods are most appropriate when the target behavior is relatively short in duration, can be easily observed and counted, and occurs regularly or often enough that significant changes are detectable. If the behavior occurs at a high frequency it may be useful to identify a time during the day to measure the behavior and identify for how long the data collector will observe the frequency of a behavior (i.e., in the morning from 9:00 a.m. to 9:30 a.m.).

Interval methods of recording behavior. At times it is impractical to record exact dimensions of a behavioral response (e.g., frequency, latency) because it occurs too often and/or over an extended period of time. For example, measuring "talking" or the number of words per conversation may be a difficult endeavor, especially if the speech is rapid and lengthy. Interval recording methods are useful for occurrence of a behavioral response when more specific measurements are impractical.

Various methods of interval recording are available to assist observers in estimating the occurrence of behavioral targets. Partial interval recording is used to document whether a behavior occurred at any time and at any frequency during a specified period of time. For example, a teacher who is testing a program to improve on-task behavior of an inattentive student may simply document whether the student was on task at any time during each 1 min interval of math instruction. Partial interval recording is most useful when responses are continuous (i.e., do not have a discrete beginning or ending), observation time is limited, and/or when recording several behaviors at the same time.

Momentary time sampling involves documenting whether a behavioral event is occurring at a predetermined interval. Using the example above, a teacher may check on a student at 10 random minute intervals during a 1 h period to see if he or she is on task. Both partial and momentary interval recording have the advantage of unburdening the observer with an excessive or time-consuming data collection process. The primary disadvantage is that by estimating the occurrence of behavior of interest, one may find it harder to document whether change occurs as a result of treatment.

Graphical Representation and Visual Analysis of Data

In SSDs, data are presented for individual participants and information is typically presented in real-time, graphical representation, allowing the researcher to easily examine the data. Data are represented in the manner that most accurately captures the variable of interest (e.g., rate, duration of the behavior), typically with each data point representing one observation period (e.g., 1 day, one class period, one session).

Although data gathered using SSDs can be subjected to statistical analysis (for attention to this issue, see Parker et al., 2005; Todman & Dugard, 2001; see also Perone, 1999 for argument on experimental control versus statistical control), traditionally analysis involves

visual inspection of data attending to level, trend, and variability within and across phases (Horner et al., 2005; Kazdin, 2003). *Level* refers to mean performance within a condition or phase; *trend* refers the rate of increase or decrease in the hypothetical "best-fit" line of the variable being measured within a phase or slope; finally, *variability* refers to the amount that data vary around the mean or slope within a phase. Hayes, Barlow, & Nelson-Gray (1999) suggest that *course* is also an important consideration when analyzing data gathered via SSDs. They define course as a more flexible method of investigating trend, allowing for a determination of whether data follow a linear or curvilinear pattern. Finally, *latency* to change in the DV after changes in the IV is also important for understanding the impact of the latter on the former (Kazdin). Specifically, the closer the time between the introduction of the treatment and the change in the DV, the more confident one is in the source of the change. By attending to each of these variables while visually inspecting data obtained, one can make determinations about the reliability and consistency of the intervention effect.

Compared against statistical analysis of data, visual inspection focuses much more heavily on clinical significance than statistical significance (Kazdin, 2003; Zhan & Ottenbacher, 2003). In clinical psychology, there has been increasing focus on clinical significance of intervention effectiveness versus simply statistical significance. Clinical significance refers to value or meaningful difference that an intervention has on a person's functioning or everyday life (Kazdin, 1999). Criteria have been suggested regarding how to determine clinical significance when using group designs (e.g., Jacobson & Truax, 1991; Jacobson, Roberts, Berns, & McClinchey, 1999), some of which argue that in order to determine clinical significance one must analyze the data at the level of the individual (Jacobson & Truax).

SSDs are well suited for focusing attention on clinical significance of intervention effects. Because analysis relies on visual inspection, emphasis is placed on ensuring that there is a large effect present in order to say with confidence that the IV produced a meaningful change in the DV(s). That is, in order to "trip the belief operant" there is an effect present, single-subject researchers demand notable changes in DVs from baseline to intervention phases. Of course, for clinical purposes, there still may be valid reasons to complete norm-based assessment using standardized instruments so as to determine whether the change altered behaviors of interest so that they are now within typical, or nonclinical limits (Hartmann, Roper, & Bradford, 1979).

15.2.1.4 Choosing a Baseline

With few exceptions, the experimenter utilizing a SSD initiates the process by completing a period of observations of the DV as it occurs in the absence of the IV. Conventionally, this first phase is referred to as the *baseline* and is labeled with an "A" when representing the data on a graph. The data pattern that emerges during this phase of the research serves as the point of comparison for patterns of data during other (often intervention) conditions. Thus, careful attention to the patterns that develop during baseline data collection is important, with particular attention to level and trend (Bailey & Burch, 2002; Kazdin, 2003).

In contrast to basic research paradigms (see Perone, 1991; Sidman, 1960), use of SSDs in applied contexts typically involves collecting baseline data during naturally occurring conditions (Barlow & Hersen, 1984; Hersen, 1982). Further, applied researchers and clinicians

because they are often working with people who may be experiencing significant distress may not have the luxury of continuing baseline observations until a narrowly defined pattern of data emerges. As such, the definition of "stability" or "pattern" is typically viewed differently when in the applied context as compared to a basic research context. This is not to suggest that applied researchers should not be vigilant in minimizing or eliminating variability in data patterns due to measurement errors or other extraneous variables that are controllable (and for which control over is warranted). Rather, the point is that the acceptable amount of control, and thus the amount of variability, differs considerably across basic and applied research environments. The remaining discussion will focus on issues primarily relevant to applied situations.

When conducting baseline observations, applied researchers and clinicians are interested in gathering a sample of the DV sufficient to serve as a standard against which to compare patterns of data produced during other conditions. To date, there remains no definitive criterion for the "right" length of baseline. The most important consideration when determining whether one's baseline observation period is adequate is that of consistency in data patterns, which then allows you to predict future data patterns in the absence of any change in experimental conditions (Kazdin, 2003). Once a pattern of consistency in the desired direction has developed one can introduce the IV and obtain interpretable findings. Although most single-subject researchers strive for a minimum of three baseline data points (Barlow & Hersen, 1984), the ultimate criteria of being able to adequately assess the impact of the IV prevails.

Although various combinations and permutations could occur, several basic baseline patterns have been described (Barlow & Hersen, 1984; Hersen, 1982). Each has particular implications for the interpretation of the impact of the IV on the DV. ❯ Figure 15.1 (top graph) depicts a stable baseline using a six-point baseline observation period with hypothetical data. Here, there is minimal variation with no significant increasing or decreasing trends across observations. Introducing the IV following this baseline period would result in unambiguous interpretation of its effect, easily determining whether there is no change (i.e., pattern remains the same during treatment), improvements (i.e., data patterns either increased or decreased depending upon the goal of the intervention), or worsening (i.e., again, data pattern either increased or decreased depending on the goal of intervention).

In contrast, the middle graph in ❯ Fig. 15.1 illustrates an increasing baseline pattern where the frequency of aggressive acts displayed by a youth at recess is increasing as baseline continues, suggesting that the behavior is worsening over time. Alternately, the bottom graph in ❯ Fig. 15.1 depicts a decreasing trend in the mean number of minutes spent completing homework per evening across successive weeks, which is also indicative of a worsening of the problem during baseline. Both baselines are acceptable patterns for treatment comparison because meaningful interpretations of the impact of the IV can be made. Specifically, if the IV produces a reversed pattern of data (i.e., decrease in the number of aggressive acts or increase in minutes spent on homework), then the original pattern serves as an adequate comparison. An increasing or decreasing baseline trend becomes problematic, however, when the IV does not produce a reversal in the direction of the behavior pattern. Specifically, such trends may mask whether an intervention has a detrimental effect, such as a worsening of the problem (Hersen, 1982).

In contrast to increasing or decreasing trends that represent a worsening in the dependent measure, baseline data patterns that indicate improvements are also problematic. Returning to the above examples, one would not want a baseline that indicates a decreasing trend in

◻ **Fig. 15.1**

The stable baseline (*top graph*): hypothetical data demonstrating slight, but negligible variation in data patterns; the increasing or decreasing baseline (*middle graph*): hypothetical data on aggressive acts demonstrating an increasing baseline and (*bottom graph*) hypothetical data on the number of minutes per evening spent engaged in homework, both representing decreasing baseline trends (Copyright 1999 by *Archives of Pediatric and Adolescent Medicine*. Reprinted by permission)
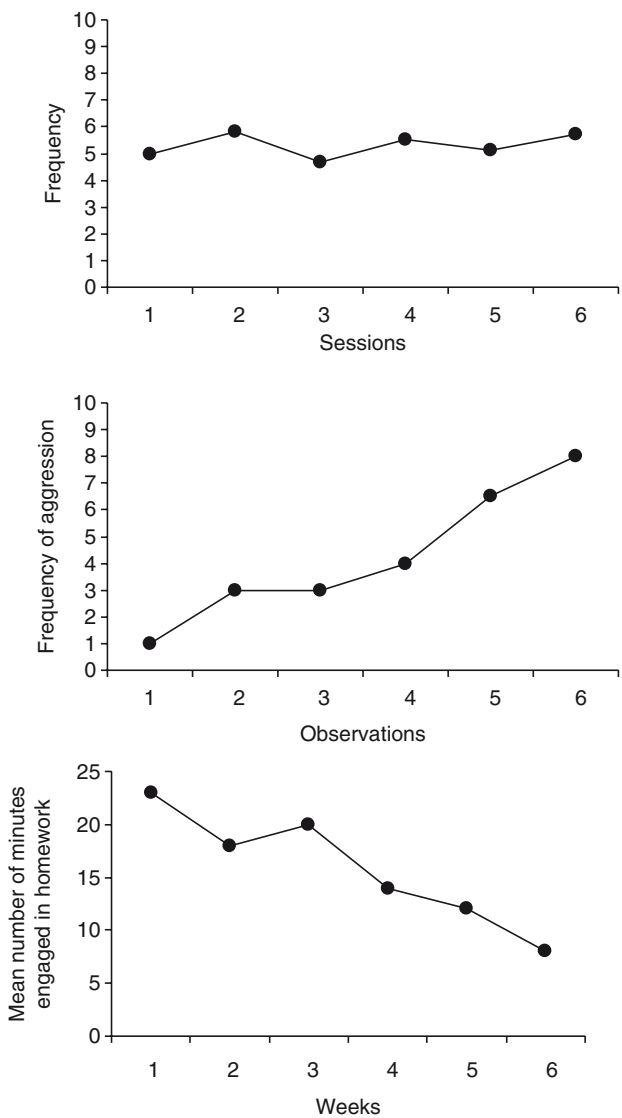
aggressive acts or an increasing trend in number of minutes spent engaged in homework. These patterns are problematic as points of comparison because one could not determine whether continued improvements following the start of treatment are the result of naturally occurring factors (i.e., those that were resulting in the initial improvement) or of the treatment.

The fourth pattern is relatively common in applied research and is called the variable baseline (see ❯Fig. 15.2). Although one could aggregate the data in a manner that minimizes the variability (e.g., by averaging the data collected over two sessions), this simply masks the variability and does not alter the basic pattern. Sidman (1960) recommended that when a researcher is faced with such a pattern in baseline data, one should seek out and eliminate the extraneous factors that produce such variability. However, as has already been mentioned, this may be difficult or excessively time-consuming for the applied researcher.

The utility of the variable baseline as a point of comparison depends on the impact of the IV. If the treatment produces a decrease in the variability of the data pattern *and* a change in the desired direction, then it is appropriate to conclude that the treatment had the desired impact. However, if variability is reduced, but the problem remains at unacceptable levels, then interpretation of the IV as useful would not be warranted. In this latter situation, although the dependent measure is impacted by the IV, the impact is not in the desired direction. Thus, one would not want to retain the treatment.

Another pattern of baseline is the variable-stable baseline. Here, the pattern is initially variable, but then becomes stable. Such a pattern may be achieved by extending the baseline observation period until it reflects a stable baseline pattern. Because the IV is introduced following a period of stability, interpretation of its impact is the same as with the stable baseline – unambiguous. While this approach is often ideal, practical and/or ethical constraints may limit the applied researcher's ability to extend the baseline to a sufficient length to establish stability (e.g., as in the case of a brief inpatient hospitalization, or when the dependent measure is severe self-injurious behavior).

Although unstable patterns of baseline data are not in and of themselves problematic, the stable-variable pattern highlights the influence of extraneous variables. This may make it difficult to evaluate the impact of treatment as the extraneous variable may interfere with the IV. In these instances, attempts to seek out and control (or at least identify and describe) these outside influences are important.

◱ **Fig. 15.2**
The variable baseline
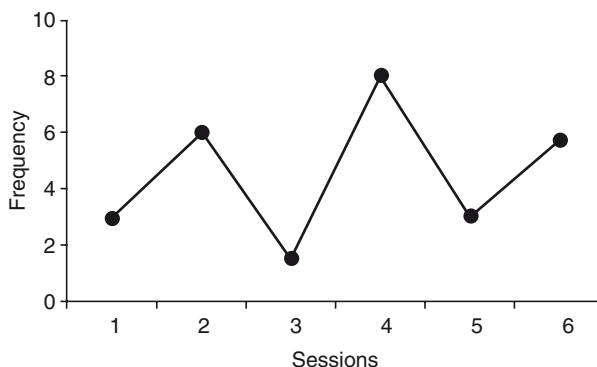
15.2.1.5 Exploratory or Quasi-experimental Designs

There are times when it is not necessary or impractical to utilize rigorous experimental SSDs when attempting to gather useful information about clinical phenomena of interest. Clinical psychology, as well as many other fields, is replete with many examples of interesting anecdotal descriptions of unique cases or systematic yet nonscientific observations of unusual phenomena. Gathering information using "exploratory" methods contributes to our understanding of phenomena of interest and often serves as the impetus for more in-depth and thorough analysis. In this section, we review two types of SSDs that allow for exploration of phenomena of interest without applying rigorous experimental criteria.

15.2.1.6 The Case Study

A case study is the "detailed study of a single individual, group, or event" (Leary, 2001, p. 321). The field of clinical psychology abounds with case studies of interesting, unique, or challenging clinical cases. And while case studies lack attention to systematic or replicable collection of information, and are without controls to threats to validity, they have several beneficial characteristics (Kazdin, 2003). They serve as a source for information and ideas about clinical problems, as well as a source for developing therapy techniques. Further, they can be a beneficial way of studying phenomena of interest that are rare. A well-documented case study can also be used to challenge principles or practices that are considered well established, by describing how they did not appear to apply to a given individual. Thus, though case studies are not experimental in nature, they play an important role in clinical psychology.

15.2.1.7 The Simple A-B Design

As was previously mentioned, the hallmarks of SSDs include repeated observation of the behavior(s) of interest across time and systematic changes in IVs. The least complex SSD utilized to accomplish these goals is the A-B design. With this design, one collects measures of the DV during baseline and then again during the treatment condition. The specific goals of the A-B design are to document change and show only once the effect of the IV. The A-B design also moves beyond the clinical case study in regards to experimental rigor because of its reliance on repeated and systematic collection of data on the DV of interest. To that end, applying simple A-B designs in clinical practice can play an important role in clinical decision making.

The A-B design emphasizes continuous data collection and observing small or large changes in behavior and thus is an example of Level I research. The A-B design can be used to demonstrate treatment effectiveness or provide information to stop an intervention strategy altogether. Specifically, if the data indicate a good rate of progress during the B phase in the form of an increase in compliant behavior for a previously disruptive child or, conversely, a decrease in tantrums then such information implies the intervention in question is working. Data from this hypothetical A-B design would encourage a clinician to persist with treatment. However, a poor rate of progress in the B phase may provide compelling information to stop treatment or examine the conditions in which these negative trends are occurring. Lastly, no change at all in behavior is also useful information that can aid in clinical decision making. For instance, in

this last scenario a clinician may consider stopping treatment, persist with treatment, or wait in order to observe changes in behavior.

The simple A-B design lacks experimental rigor as compared to other SSDs, and thus may be most appropriate for use in clinical rather than research contexts. Specifically, inclusion of only one phase of each of the components (i.e., baseline and treatment) decreases the ability to adequately assess experimental control or internal validity. Although multiple threats to interval validity exist when using the simple A-B design (e.g., maturation, statistical regression to the mean, spurious introduction of noncontrolled variables affecting individual coinciding with introduction of treatment), its use by practitioners interested in documenting intervention effects is appropriate. Further, the A-B design is appropriate when practical or ethical limitations decrease one's ability to remove the intervention as a means of demonstrating experimental control (e.g., treating severe, life-threatening behavior). In these situations, the scientist-practitioner is at least gathering data to document whether change is occurring, regardless of whether effects can be fully ascribed to the specified intervention.

15.3 Expert Competencies

Having reviewed the fundamental competencies related to SSD and the two most basic types of SSDs, attention is now turned to more elaborate SSDs which allow one to examine specific effects of the independent/criterion variable on the dependent/outcome variables. First, additional critical features of SSDs necessary for increasing their experimental rigor are discussed. Then, "classic" single-subject withdraw designs and variations of these designs that allow for experimental control over the DV as well as alternatives to the withdrawal designs are reviewed.

These types of research methodologies reflect expert competencies, or Level II and Level III type of research (Hawkins & Mathews, 1999), useful for experimentally demonstrating the relationship between the introduction of treatment and changes in behavioral targets. Expert competencies in SSD reflect more rigorous analysis of cause-and-effect relationships and using SSD in a controlled methodological approach for research purposes. In particular, advanced application of SSD research strives toward a systematic explanation of observations with a particular emphasis on replication of treatment effects, measurement issues, interpretation of results with a consideration for validity issues or limitations, and expertise in the production of visual graphs to convey results concisely and accurately.

15.3.1 Additional Characteristics of SSDs

15.3.1.1 Replication of the Experimental Effect

The role of experimental replication of observed effects is one of the primary principles of scientific inquiry (Morgan & Morgan, 2001). Through replication, scientists are able to provide information about the reliability of observed effects as well as to self-correct when initial findings are not consistently obtained. Unfortunately, replication studies are lacking in behavioral sciences, including clinical child and adolescent psychology. This is likely due to a host of reasons, an important one being the energy and expense of replicating studies that rely on large groups of participants.

A hallmark of experimentally sound SSDs (i.e., those that allow for a determination of the functional relation between the IV and changes in DVs) is replication. That is, SSDs set as the standard repeated demonstration of the impact of the IV as the measure of experimental control. Support for the interpretation of the IV (e.g., training parents in methods of giving clear instructions to their children) as the cause of the change in the DV (e.g., rate of child compliance to adult instructions) increases each time one demonstrates that the latter changes as a function of a change in the former. Because of this, each participant in single-subject research is repeatedly exposed to baseline and treatment conditions. How this happens will vary depending on the specific SSD chosen.

Replication occurs across participants as well. The nomenclature describing SSDs implies that only one participant is involved (e.g., SSD, *n* of one designs). However, most research using these designs involve multiple participants (Horner et al., 2005; Leary, 2001), though there is no gold standard for the number of individuals who should be included in a single study to allow for adequate assessment of intervention effects across individuals. Each time an intervention effect is observed with a different participant, confidence that the IV is responsible for the change increases. Thus, when there is a small effect, researchers strive to have more participants so as to increase confidence in interpretation of the source of the effect. The number of participants needed may be fewer if the effect is large.

There are instances in which repeatedly introducing and removing an intervention are impractical or unethical. For instance, one may implement an intervention focused on skills acquisition (e.g., teaching a child with an intellectual disability how to tie his or her shoes). In this instance, maintenance of the behavior is probable even if intervention is withdrawn because of the naturally rewarding properties of engaging in the behavior. Or, perhaps the intervention is designed to address a serious or threatening behavior (e.g., suicidal self-harm) and thus removing an effective intervention may be considered unethical. In these instances, researchers will rely on SSDs that more heavily focus on intersubject replication and, in some cases, cross-situational replication as a means of investigating experimental control of the IV on changes observed in the DV (see "Multiple Baseline Designs" section below). Regardless of the type of SSD used, however, the goal is always to demonstrate multiple instances of the effect of the IV on the DV.

15.3.1.2 Changing One Variable at a Time

Another essential tenet of SSDs, especially research conducted at the Level II and III, is that only one variable should be altered at a time when moving from one phase of the experiment to the next (Barlow & Hersen, 1984; Hersen, 1982). For example, if a researcher was determining effective interventions for treating chronic pain, the investigator would want to introduce only one intervention (e.g., deep breathing) at the start of the treatment phase. If more than one variable is changed, then it becomes impossible to determine which variable is producing change in the DV. Continuing the above example, using two strategies such as deep muscle relaxation *and* introducing a particular cognitive intervention (e.g., meditation) at the same time would result in a situation in which it would be impossible to determine which produced any noted improvements that occur. Thus, unless the investigator is actually evaluating an intervention with multiple components (see discussion

below), standard practice is to hold all variables constant except for one IV as the investigation moves from the baseline to the treatment phase.

Although the general guideline is to only change one variable at a time when transitioning from baseline to treatment, as with any rule there are exceptions. If a researcher is interested in the combined effect of several IVs, as is often the case with many empirically supported interventions (Kazdin & Weisz, 2003; Mash & Barkley, 2006), then it is acceptable to vary more than one variable. For example, consider a hypothetical investigation where researchers are interested in the effects of a combined intervention for treating childhood depression (i.e., individual sessions, parent sessions, group sessions), and therefore introduced several strategies as a "package" intervention. In this way, the authors were able to determine the impact of the combined treatment on the targeted behavior. It should be noted, however, that if investigators are using such an approach to experimentally demonstrate control over the DV, all IVs should be introduced simultaneously, rather than progressively. In this way, the package intervention essentially becomes one IV. Although by using a package treatment it is impossible to determine which component of the intervention is producing the change, or whether it is the components in concert, such an approach allows one to determine if the combined intervention impacts the DV.

With regards to Level I research in the clinical realm, the goal is typically to demonstrate clinically relevant change in the target behavior, rather than showing experimentally validated cause–effect relations (Hawkins & Mathews, 1999). At this level of research, the purpose is not to prove empirically that an intervention is effective and clinicians need not necessarily change one variable at a time. In contrast, if the package intervention is implemented such that all components are introduced simultaneously clinicians practicing at Level I or II research would systematically withdraw components of treatment and track the DV over time to evaluate which components are essential (Kazdin, 2003; see also Jones, 1993).

15.3.2 "Classic" Single-Subject Withdrawal Designs

One of the most common categories of SSDs used in research involves systematically and repeatedly introducing and withdrawing an intervention and documenting the impact of those changes on the DV(s) of interest. This group of designs has been referred to as equivalent time-samples designs (Campbell & Stanley, 1966), withdrawal designs, and reversal designs (Kazdin, 2001). In this section, we describe common designs that are the result of permutations of the basic procedure of introducing and withdrawing intervention.

15.3.2.1 The A-B-A Design

The A-B-A design corrects the primary limitation of the A-B design by including a return to the original baseline conditions. This serves as a means of confirming experimental control over the dependent measure by allowing for repeated demonstration of experimental effect. If the dependent measure returns to a pattern that is similar to the original baseline, then stronger assumptions about the causal role of the IV can be made. In contrast to the A-B design, one is less concerned that some extraneous variable(s) coincided with the introduction of the

treatment phase. Although this may happen once, the possibility of another change in extraneous variables occurring at precisely the same time that the intervention is both introduced and withdrawn is so remote that it does not constitute a realistic threat to internal validity.

Although the A-B-A design corrects for problems of the simple A-B design, it has limitations. Most importantly, for the clinical researcher, completing an investigation while the participant is exposed to baseline conditions is problematic. Let us return to the example above of the adolescent client with depressive symptoms. Assume that an A-B-A design was used in which the B phase consisted of effective use of behavioral activation strategies. Ending the investigation while the participant was exposed to baseline conditions would be problematic if those conditions produced a return in data patterns similar to the original baseline. In this example, the client would be left to deal with his or her problems without the aid of intervention. Although perhaps not required to demonstrate experimental control, clinically and ethically reintroducing the intervention so as to address the presenting complaint would be prudent.

15.3.2.2 The A-B-A-B Design

By introducing an additional treatment phase, the investigator creates the A-B-A-B design. This design controls for the limitation of the A-B-A design and is more methodologically rigorous due to the fact that three opportunities occur to compare the behavior patterns during baseline and treatment conditions (that is, A to B, B to A, and A to B).

To illustrate the A-B-A-B design, consider Friman et al. (1999), who investigated the impact of an intervention for bedtime behavior problems exhibited by two children, ages 3 and 10 years. Both children exhibited bedtime problems in the form of calling out from their bedrooms and leaving their rooms after their parents had put them to bed. Baseline data were collected across 15 days, during which time parents were instructed to respond to the bedtime problems as they would typically. Treatment began on the 16th day and involved parents providing each child with a "bedtime pass" good for one free trip outside of the room past bedtime (e.g., get a drink of water, get another hug). Once the pass was used, it was relinquished to the parents, and no further trips were allowed. The pass was returned to the child the subsequent night. During intervention, the parents were instructed to ignore all crying and simply physically guide the child back into his or her room if he or she were to leave without the use of the pass.

Results of the experimental analysis are presented in ❯ Fig. 15.3. Somewhat variable, but increasing trends are noted in the dependent measure for both participants during the initial baseline. Following introduction of the intervention, a marked decrease in the targeted behavior occurred, to zero for the 10-year-old participant. Thus, it was demonstrated quite clearly with both participants that the behavior changed in the desired direction during the initial intervention phase. This is tempered slightly, however, with the 3-year-old participant. For him, as intervention continued, the behavior problems began to increase again after the initial decrease. Reintroduction of the baseline conditions (i.e., withdrawal of the bedtime pass) resulted in the increased occurrence of the bedtime behavior problems, which decreased to zero for both participants upon the re-administration of the intervention. Obtaining zero rates of behavior with the 3-year-old participant during the second intervention phase adds strength to the determination of experimental control given the initial variability in the first intervention phase.

Nightly frequency of crying and leaving the room for the 3-year-old child (*top*) and the 10-year-old child (*bottom*). (From Friman et al., 1999)
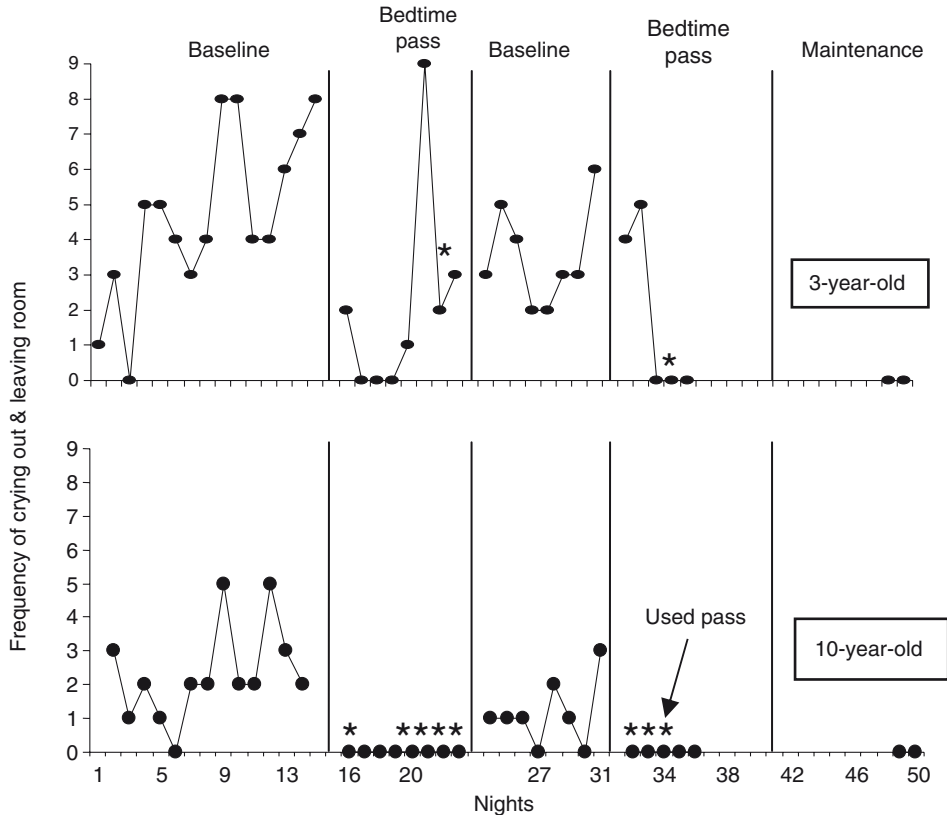
15.3.2.3 The B-A-B Design

Although single-subject research typically starts with an initial baseline period, there may be instances in which this is not feasible. For example, perhaps the investigator is only able to gather data after some form of intervention is put into place. Or, perhaps a person's clinical issues are so severe that attempts at intervention are needed immediately, such as the case when consultants are requested to provide immediate interventions for individuals in an inpatient unit who are engaged in frequent self-injurious behaviors. In either case, it is possible to use the B-A-B design. Although not as complete as the A-B-A-B design (i.e., because it does not allow for as many repeated comparisons of the experimental effect), it is more advantageous than the A-B-A design because it ends on a treatment phase (Hersen, 1982).

15.3.2.4 Variations of the Withdrawal Designs

The underlying strategy employed to demonstrate functional control using the various withdrawal designs (e.g., A-B-A, B-A-B) – the repeated introduction and withdrawal of the

intervention – allows for various extensions of the basic designs. Thus, perhaps endless permutations or formations of the basic components of the designs can be created to address particular questions of interest. Several examples of such designs are considered next, although the list is not meant to be exhaustive.

15.3.2.5 A-B-A-B-A-B Design

The basic components of the A-B-A design can be extended resulting in multiple withdrawals and administrations of the IV (e.g., the A-B-A-B-A-B design). Using such a design adds further support for the demonstration of functional control of the IV over the DV. By demonstrating multiple times that the data patterns change in the expected direction when the treatment is added and withdrawn, the researcher can be more confident that the effect is due to the particular treatment variables. Although this might not be necessary when the treatment effect is large (i.e., when there is a significant difference in the data pattern between baseline and treatment conditions), repeatedly demonstrating the desired effect may be necessary when the effect is small (i.e., when the difference between the two conditions is small). Observing minimal or moderate changes multiple times may provide more convincing evidence that the IV is producing the impact, above and beyond natural variability.

15.3.2.6 A-B-A-C-A-C Design

Introducing a condition in which the effects of a second IV are assessed, as with the A-B-A-C-A-C design, also can extend the basic A-B-A design. In such a design, the investigator compares the impact of treatment conditions B and C on the DV. However, with such a design, one is not able to compare the *relative* effects of the different IVs because they are confounded by the extraneous variable of time (Hersen, 1982). Further, order effects may confound the findings. Perhaps the conditions present in C only have an impact after the participant is exposed to the conditions present in B. With such a design, one is unable to determine whether this is the case, and thus there is a threat to the internal validity of the study. If completing intersubject comparisons, one can control for this by using a counterbalancing technique (i.e., participants 1 and 3 are exposed to the conditions in the following order: A-B-A-C-A-C, whereas participants 2 and 4 are exposed to them in the following order: A-C-A-B-A-B). By using counterbalancing, the researcher is able to determine whether the IVs produce similar effects regardless of order of presentation. Thus, if all participants respond to condition C in similar ways regardless of when they were exposed to this condition, then one has greater confidence in the effect of C alone.

15.3.2.7 Interaction Designs

As stated earlier, single-subject research typically involves a change in only one variable at a time across conditions. This rule can be applied in a way that allows the investigator to evaluate the combined effects of multiple IVs by using a withdrawal design. Specifically, by introducing a condition in which two IVs are present, it becomes possible to assess the impact of the

combined intervention relative to a single intervention. In some situations, a particular treatment may produce minimal impact, or may produce an impact that is less than that which is desired. By extending the basic components of the A-B-A design, one can assess the impact of adding additional treatment components.

Assume, for example, that a researcher is interested in treating a severe tic disorder. ❯ Figure 15.4 shows hypothetical data in this scenario. After establishing a baseline of the number of tics during a 1 h period of the day, the impact of a behavioral treatment is evaluated. As is shown, although the number of tics decreases somewhat due to treatment, the desired goal of zero tics is not achieved. Thus, the investigator adds an additional pharmacological component to the intervention – the use of an antihypertensive medication. This results in a condition labeled "BC" because it involves both components (i.e., behavior treatment + medication). As shown in ❯ Fig. 15.4, the combined intervention results in decreases in the DV leading to zero. When the investigator withdraws the medication, the data patterns return to being similar to the original treatment phase. Finally, the combined intervention is reintroduced, resulting in the elimination of the tics. As illustrated, it is possible to demonstrate the impact of the combined intervention with such a design. Put another way, one is able to investigate the relative impact of condition C over condition B. The number of combinations is theoretically endless, potentially resulting in conditions such as B-C-D, B-C-D-E, and so forth.

15.3.3 Stage-Process Designs

Although withdrawal designs have proven remarkably useful in scientific inquiry, partly because of the flexibility in applying the basic concepts of repeated observations and replication

◼ **Fig. 15.4**
Number of tic behaviors during a 1-h period. Hypothetical data of the assessment of intervention for tics
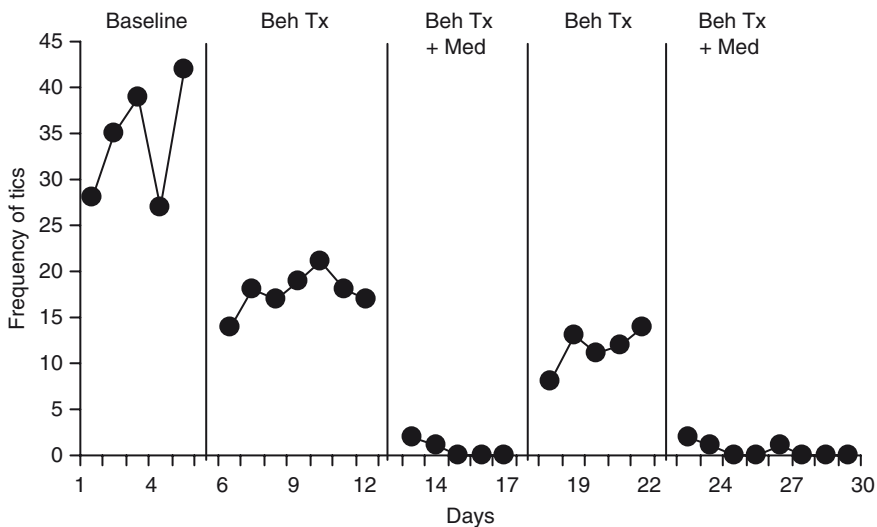
of experimental effect in multiple ways, there are situations in which their use is not appropriate (e.g., treating serious, life-threatening behavior; intervention results in behavior supported by variables beyond intervention). In situations in which repeated withdrawal and reintroduction of the intervention is either impractical or unlikely to influence behavior in expected ways, various other SSDs are used. These include the multi-elements design, multiple baseline designs, and changing criterion designs.

15.3.3.1 The Multi-elements Design

The multi-elements design (also referred to as the simultaneous treatment design or the alternating treatments design) differs from other SSDs in that multiple conditions (i.e., baseline and treatment conditions, two or more treatment conditions) are conducted in rapid succession, with the order of presentation typically determined through random selection, and compared against each other (Miltenberger, 2001). For example, perhaps baseline conditions are in effect on 1 day, treatment conditions the next, and so forth. Thus, unlike withdrawal designs, the effects of the different experimental conditions are evaluated across the same time frame. This helps eliminate the possibility of extraneous influences on the DV during only one experimental condition. In other words, any extraneous variable is going to impact the DV during all conditions because they are occurring essentially in conjunction. One is able to rule out the extraneous as the cause of any differences noted across conditions.

With the multi-elements design, often there are three phases: baseline, comparison (rapid alternation between two or more conditions), and the use of the effective intervention (Holcombe et al., 1994). In some situations, however, the baseline might not be necessary. This may be particularly true if one of the comparison conditions is a baseline condition. One treatment condition is judged to be superior if it produces data patterns in the expected direction at a level that is greater than other conditions. Another component of the multi-elements design is that an equal number of sessions of each condition should be conducted. To ensure discriminated responding across conditions, researchers often pair separate but salient stimuli with each condition. This design may be particularly useful if the investigator is comparing interventions that have an immediate effect, and when the dependent measure is particularly sensitive to changes in stimulus conditions (i.e., reversible; Holcombe et al.).

The multi-elements design can be used to compare a variety of different variables of interest. For example, the design can be used to compare different assessment conditions, such as in functional analysis research (e.g., Anderson, Freeman, & Scotti, 1999). In addition, this design can be used to compare a treatment condition to baseline (e.g., Freeman & Piazza, 1998), or to compare multiple treatments (e.g., Kahng, Iwata, DeLeon, & Wallace, 2000). Such an approach allows the investigator to assess which intervention may prove to be the most effective in changing the targeted DV. The benefit of such a design over other designs is the ability to make such treatment comparisons in a relatively short amount of time.

15.3.3.2 Multiple Baseline Designs

There are three types of multiple baseline designs: (a) multiple baseline across behaviors, (b) multiple baseline across persons, and (c) multiple baseline across settings (or situations)

(Hersen, 1982; Miltenberger, 2001). With the multiple baseline design across behaviors, the impact of an intervention across different behaviors emitted by the same person is evaluated. As such, this is a within-subjects design. The intervention is applied sequentially to the different (presumably) independent behaviors. An example might be evaluating the use of a particular reward strategy to treat pediatric obesity, where a reward is provided each time a child makes a healthy choice during the day (i.e., walking or biking to school, choosing water over juice at meals, and choosing a healthy meal option when eating out). The second design – multiple baseline across persons – involves the evaluation of the impact of a particular intervention across at least two individuals *matched* according to relevant variables who are presumed to be exposed to identical (or at least markedly similar) environments. For example, the investigator may compare an intervention across two students who attend math class with a particular teacher, one who attends in the morning and one who attends in the afternoon. Finally, with the multiple baseline across settings design, a particular intervention is applied sequentially to a single participant or group of participants across independent environments (e.g., home and school).

Technically, there must be at least two separate dimensions (i.e., behaviors, settings, or persons) present to utilize a multiple baseline design, although convention suggests a minimum of three or more. Multiple baseline designs are characterized by the presence of only two conditions: baseline and treatment. However, unlike the simple A-B design, treatment is introduced in such a way that one is able to evaluate experimental control of the IV. Specifically, the baseline condition is extended for increasing lengths of time as the intervention is introduced with the other DVs. Thus, these designs are particularly useful for studying irreversible effects, because replication is achieved without withdrawal and reintroduction of the IV (Perone, 1991).

An assumption underlying the multiple baseline designs is that the dependent measures (i.e., behaviors, persons, settings) are functionally independent. If this is the case, a change in one DV as a result of the IV should not produce changes in the other DVs. Treatment effects, therefore, are inferred when the dependent measure changes only when the intervention is applied to it. Variables still exposed to baseline conditions should show little to no change when the treatment is introduced with the other DVs. In this way, the multiple baseline designs are weaker than other designs (Barlow & Hersen, 1984; Hersen, 1982). Specifically, experimental control is inferred based on the comparison of nontreated DVs as compared to the treated variables, as well as the replication of the effect across behaviors, persons, or settings.

If the DVs are not functionally independent (i.e., treatment with one variable produces changes in the other variables), then the ability to establish experimental control is compromised. Determining a priori whether DVs are independent can be difficult, however. Take, for example, a situation in which the dependent measures are three problematic behaviors of a student in a classroom (i.e., talking out of turn, throwing spit wads, getting out of seat without permission). As an intervention, the investigator instructs the teacher to respond in a particular way to the behaviors (e.g., differential reinforcement of competing behavior), and evaluates the impact of the intervention using a multiple baseline design. The student may well learn to change each of the behaviors simply by exposure to the treatment for one behavior (e.g., differential reinforcement when the student talks out of turn affects other behaviors). As this example illustrates, as an artifact of the lack of independence, intervention with one DV may produce changes in the other variables, resulting in the *inability to demonstrate* experimental control. This is problematic because the intervention may be the controlling variable in this situation, but this cannot be demonstrated in a convincing manner.

Kazdin and Kopel (1975) provided three recommendations for addressing problems of dependence across DVs. First, they recommend selecting dependent measures that are as topographically distinct as possible as a means of increasing the likelihood that they are independent. However, such an approach still relies on successful "guessing" as topographically distinct behaviors may still be functionally related. Second, they suggest that investigators utilize four or more baselines as compared to two or three. They argue that by increasing the number of baselines, one is increasing the likelihood of selecting measures that are independent. However, as pointed out by Hersen (Barlow & Hersen, 1984; Hersen, 1982), the probability of interdependence may be enhanced with a larger number of DVs. Finally, Kazdin and Kopel recommend that, when faced with the occurrence of dependence across variables, the investigator withdraws and then reintroduces the IV. By doing so, it may be possible to demonstrate adequate experimental control. Although the investigator originally may have selected the multiple baseline design to avoid using a withdrawal design, this may be necessary to adequately demonstrate control.

To a certain extent, there are competing clinical and research goals when considering multiple baseline designs. From a research standpoint, the goal is to identify target DVs that are less likely to be influenced by changes in other targeted DVs. However, clinically, one is often interested in designing interventions that address not only targeted behavior patterns, but are also likely to produce change that generalizes to other relevant behaviors or contexts. For instance, as a therapist working with an adolescent with social anxiety is likely to be interested in implementing interventions that not only address anxious responding in the classroom setting, but also in the lunchroom, during extracurricular activities, and so forth. The clinical goal is to teach skills that will generalize to relevant contexts. Of course, whether generalization happens naturally (e.g., teaching use of relaxation skills in the classroom results in the person also using those skills in the lunchroom) or must be programmed explicitly (e.g., prompting adolescent to use skills across settings) will only be determined as one progresses.

15.3.3.3 Nonconcurrent Multiple Baseline Design

The presumption of the multiple baseline designs is that the measurement of the different DVs occurs simultaneously. In this way, the designs control for threats to internal validity as such as history effects. However, there may be situations in which it is particularly difficult to obtain simultaneous observations on multiple individuals who meet the specified criteria, thus limiting one's ability to utilize the multiple baseline across persons design. This may be particularly true in applied or clinical research (Hayes, 1985). In such situations, it may be possible to utilize the nonconcurrent multiple baseline design, originally described by Watson and Workman (1981).

With the nonconcurrent multiple baseline across persons design, each baseline length is predetermined (e.g., 3, 6, 9 days). Then, when a participant with the requisite features is available, she or he is exposed to a randomly selected baseline period. From this point, the methodology is conducted in the same manner as the simple A-B design – baseline observations are conducted for the predetermined length, followed by the application of treatment. In this way, baseline and treatment data are obtained from multiple participants, allowing for adequate between-persons comparisons. If a participant fails to display an acceptable baseline pattern, that individual would be dropped from the investigation, although their eventual reaction to treatment may still be useful as a replication (Watson & Workman, 1981).

Some (e.g., Harris & Jenson, 1985a, b) have argued that the nonconcurrent multiple base-line design across persons is equivalent to a series of A-B designs with replication. This nomenclature has been recommended because multiple baseline designs rely on simultaneous data collection as a means of demonstrating adequate control over threats to internal validity. As described earlier, by showing that the change in the DV occurs only when the treatment is introduced, the investigator has confidence in the causal relationship. This is strengthened when data with several individuals are collected simultaneously because the design controls for history effects. Harris and Jenson (1985a, b) argued that the nonconcurrent multiple baseline design does not control for such effects because the data are not collected across individuals simultaneously; thus, the individual is not exposed to the same environment.

By varying the length of baseline, however, the nonconcurrent multiple baseline design does control for threats to internal validity (Hayes, 1985; Mansell, 1982). Specifically, each time that the investigator demonstrates that the dependent measure changes when the treatment is introduced, regardless of the length of baseline, the likelihood that an extraneous variable produced the change for each participant is greatly reduced. Further, by using increasing lengths of baseline, the researcher controls the possibility that the exposure to baseline conditions naturally produces changes in the dependent measure. Thus, although generally considered one of the weaker SSDs, the nonconcurrent multiple baseline across persons design can serve as a useful methodology if other factors limit the ability to utilize a more stringent design.

15.3.3.4 Changing Criterion Design

The changing criterion design shares features with both the simple A-B and the alternating treatments designs (Hersen, 1982; Miltenberger, 2001). Specifically, it is characterized by the presence of only one baseline and one treatment phase. However, what differentiates this design from the A-B design is that the treatment condition is defined by the sequential introduction of different performance goals. In other words, the treatment phase is applied until the targeted DV achieves a specified level of performance. At that time, the goal (i.e., criterion) of performance is altered and the intervention continues until the behavior again achieves the desired level. Changes in the criterion occur until the dependent measure is occurring at the desired terminal level. As such, the changing criterion design is particularly well suited for situations in which the investigator is interested in evaluating shaping programs that are expected to result in increases or decreases in the dependent measure (e.g., decreased cigarette smoking, increased level of exercise; Hersen). Evaluation of the intervention as the causal agent occurs through two comparisons: between the occurrence of the dependent measure during baseline and treatment, and between the occurrence of the dependent measure across the different levels of the intervention. If the DV changes in the desired direction only when the criterion changes, then the investigator can have confidence in the controlling nature of the IV.

15.4 Moving from Basic to Expert Competence in Use of SSDs

As should be evident from the discussion thus far, moving from basic to expert competence involves developing an understanding of the methodological structure of the various

single-subject research designs and how they can be used to successfully investigate relations between particular interventions and behavior change. Additional knowledge and skill sets are important for transitioning from novice to expertise.

Developing an understanding of how SSDs address issues of internal and external validity is important as one moves to expert competence. Except for quasi-experimental SSDs (e.g., the simple A-B design), SSDs adequately address issues of validity in multiple ways. Regarding internal validity, through use of repeated measurement across time, repeated demonstrations of the impact of IVs, and intra- and inter-participant comparison, single-subject methodologies control for threats such as maturation and history effects, for example. Extraneous variables that threaten internal validity are assumed to be constant across baseline and treatment conditions, and thus any notable differences across the conditions can be attributed to the IV.

External validity is addressed through two types of replication: direct and systematic replication (Sidman, 1960). Direct replication is accomplished by demonstrating the impact of the IV across participants with similar characteristics. As the number of replications of the impact increases across participants, the extent of generality is identified. Systematic replication, or replication that involves varying some aspect of the original experimental conditions, is also used to address external validity. That is, using single-subject methodologies to demonstrate replication of treatment effects across clinical disorders, patient populations, settings, clinicians, and so forth allows for the assessment of the extent to which the findings are externally valid.

Another important skill set demonstrating expertise in the use of SSDs is the ability to appropriately select the design based on DVs of interest and interventions to be used. For example, withdrawal designs are particularly relevant for testing interventions that are expected to have a relatively rapid effect on the DV, as well as those that can be introduced and removed (e.g., reward system). Further, they may be best suited for behavioral patterns that are likely to remain influenced primarily by the intervention. To illustrate, consider an intervention designed to teach young children the skills needed to tie their shoes. Once established, subsequent decrease of the skills is unlikely when treatment is withdrawn as the skills are now maintained by their outcome – shoes that are tied. Thus, one would not be able to demonstrate intrasubject replication of treatment effects by documenting that behavior changes in expected directions with intervention is repeatedly introduced and withdrawn. Instead, stage-process designs may be best when testing interventions that focus on skills acquisition. However, if the intervention is designed to increase compliance with the instruction to tie one's shoes with children who have learned how to do so (i.e., have acquired the skills) yet are defiant when requests to tie one's shoes are issued, withdrawal designs may be appropriate to test whether a contingency management system increases compliance.

Several additional skills are unique features of a researcher or clinician with expertise in the use of SSDs. First, an expert researcher or clinician who utilizes SSDs should be able to produce visually appealing and accurate graphs, avoiding visual distortions that may generate biased results (Krishef, 1991). Second, experts in SSD should be able to effectively communicate data results in language that is simple and clear enough for the average audience to appreciate. Third, the expert researcher or clinician should be able to discriminate features of the data, such as variability, level, and trend (Horner et al., 2005). Fourth, as a consumer of research products the expert researcher or clinician should be able to decipher meta-analytic studies of single-subject

research (Morgan & Morgan, 2001; Scruggs & Mastropieri, 1998). Fifth, expertise in SSDs involves the ability to utilize said designs within one's own research agenda, consulting with others regarding how to apply SSDs and training others (e.g., graduate students) in their use. In other words, demonstrating expertise involves both knowing how to use SSDs and knowing how to train others in their use.

Students interested in SSD research and its application in clinical practice will need support in the form of mentorship and supervision in order to put skills into practice and move from novice to experts. It should be noted that support may be difficult because of existing bias toward group-design research over single-subject research in doctoral training programs (Blampied, 2001). Specifically, "[i]f the training environment is ignorant or hostile, trainees' opportunities to integrate single-case based clinical work into their growing experience of the practice of clinical psychology will be impaired" (Blampied, p. 161). Students who choose the route of single-subject research methodology for their master's theses, dissertations, or for other research and publication activities will need training directors, advisors, and mentors to be alert to barriers that impede the single-subject research approach. Additionally, students will need guidance from skilled supervisors who are, at best, knowledgeable about the single-subject approach, and, at the very least, supportive and tolerant of the single-subject approach.

15.5 Summary

SSDs are unique approaches to scientific inquiry due to several features, including repeated observation of the DV, replication of treatment effects, intrasubject and intersubject comparisons, visual analysis of individual participant data, and systematic manipulation of IVs. Further, direct and systematic replications are used to establish the generality of the findings. Together, these features allow the investigator to guard against, or to detect when present, threats to internal and external validity. Thus, their use in psychological and psychotherapy research can allow investigators to answer questions of interest in a manner that meets the requirements of the scientific method (Hayes et al., 1999; Hilliard, 1993; Morgan & Morgan, 2001).

Single-subject research designs lend themselves well to all areas of research, beginning at the development of a new theory, hypothesis, or intervention (Level I) to a formal and systematic test of said theories, hypotheses, and interventions (Level II and Level III; Hawkins & Mathews, 1999; see ❯ Table 15.1). In this way, SSDs are useful not only in the context of psychological research, but also in the context of demonstrating the effectiveness of clinical interventions (Hayes et al., 1999; Hilliard, 1993; Kazdin, 2003). Psychotherapy as a process involves first hypothesis building (i.e., developing reasonable explanations for the client's current conditions) and then hypothesis testing (i.e., assessing the effectiveness of an intervention expected to be effective based on the original hypothesis). Initial interventions may not be effective, and thus clinicians may experiment with others until improvements are noted. Flexibility of SSDs can allow clinicians to collect data and manipulate variables in a way that allows for adequate demonstration of therapeutic outcome as a result of specific interventions. Therefore, their use within psychotherapy can facilitate a clinician truly operating as a scientist-practitioner.

⬛ **Table 15.1**
Single-subject designs within all levels of research

	Goal	Defining features	Examples from SSDs
Level I	Document or create change	Baseline data is collected Data is collected continuously New variables or new measurement tools added based on clinical judgment Reliable and valid measurement tools and methods Graphical representation of data Findings from Level I research may lead to hypotheses that may be tested in more rigorous Level II research	The case study Simple A–B design
Level II	Semi-scientific evaluation of a treatment	Hypotheses are stated clearly Predictor and criterion variables in the hypotheses are clearly defined Reliable and valid measurement tools and methods Data is evaluated Conclusions are drawn about whether the research hypothesis was supported or should be rejected	Simple A–B design applied to a treatment found to be previously efficacious
Level III	Scientific research	Goal is to replicate previous treatment findings (research question: *Will we find the same thing?*) Goal may be to generalize findings to another population or context (research question: *Will we find the same thing with this new group or in this new situation?*)	Withdrawal designs A-B-A, A-B-A-B, A-B-A-B-A-B, A-B-A-C-A-C Stage process designs multi-element design multiple baseline design nonconcurrent multiple baseline changing criterion design

Rigorously applying SSDs to clinical practice presents challenges, however. Specifically, as articulated at various places throughout the chapter, the requirements needed to experimentally demonstrate that changes in the DV are the result of an intervention using SSDs can be at odds with the realities of clinical practice. A fundamental issue is identifying the variables (e.g., context, type of behavior, question being asked, population being served, resources available) for deciding which SSD is most appropriate for use in a particular clinical context for a specific purpose. For instance, if a treatment has already been established as evidence-based, then a simple A-B design may be appropriate as a mechanism of monitoring change. Further, reporting to the scientific community multiple applications of an intervention's effects using simple A-B designs will help support clinical application of the intervention that was originally tested in highly controlled conditions. On the other hand, since many interventions (including those identified as empirically supported according to APA criteria; Chambless & Hollon, 1998; Chambless et al., 1996; Task Force on Promotion and Dissemination of Psychological Procedures, 1995) have not been subjected to effectiveness trials or used with special populations (e.g., rare disorders, with individuals with comorbid disorders), the use of SSDs provides an opportunity to establish effectiveness of the treatment in a clinical context and with variations of client characteristics that were not included in randomized clinical trials. One can envision a multistage process in which SSDs are initially used in clinical contexts to establish treatments as evidence-based. Following this, treatments can be used more clinically in a single-case decision making framework that meets certain purposes (e.g., case formulation, treatment design, monitoring progress), but would not require withdrawal or multiple baseline designs in part because the intervention had been established as effective in previous research.

The issue of how to successfully incorporate SSDs into clinical practice is complex and full attention to it is beyond the scope of this chapter. We raise the issue here to encourage people to consider how to integrate SSDs into clinical practice, and how the pursuit of doing so is beneficial for not only clinicians and their clients (e.g., through documentation of change, better-informed decision making) but also for the research community (e.g., by verifying previous outcomes with unique populations, by raising additional questions to be addressed through more comprehensive or precise research).

In conclusion, SSDs have critical underlying assumptions and basic characteristics that separate them from group designs, while still ensuring that data are collected and analyzed in an experimentally rigorous manner. Although historically SSDs are aligned with operant traditions of behavioral psychology (Sidman, 1960; Skinner, 1974) (e.g., Hayes, 1981), these designs are largely theory-free (e.g., Hayes) and can be useful for any investigator (whether a researcher or practitioner) who gathers time-series data in a systematic fashion. Thus, regardless of theoretical premise of a given researcher or practitioner, SSDs may be appropriate for determining causal or functional relations between changes in the DV(s) and introduction of the IV. This is not to suggest that solid training in the philosophical and theoretical context in which these designs were developed is not important (Blampied, 1999), but instead to support their broad utility in the diverse field of clinical child psychology. Further, their utility is exemplified by the fact that there are frequently calls for more single-subject research in various fields of psychology and beyond (e.g., Cook, 1996; Hrycaiko & Martin, 1996; Lundervold & Belwood, 2000). Not only are they useful for explicit research purposes, they can also be used to assist practitioners in determining the impact of their efforts. Because of this, understanding the SSDs is important for both researchers and clinicians alike.

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16 Qualitative Research

Donald E. Polkinghorne

Abstract: Qualitative research refers to the group of inquiry approaches developed to produce knowledge about the experiential realm of human beings. The focus of these approaches is on describing and understanding the meanings people attach to their encounters with other people, their cultural environment, and material objects. Qualitative research holds that the organization and content of the human experiential realm more closely resembles that of natural language rather than numbers. Qualitative studies generate data in the form of participant descriptions of their experiences and use literary analytic procedures to produce higher-order descriptions and understandings of the investigated experience. Qualitative studies produce a different kind of knowledge than quantitative studies. Its studies are concerned to examine the depth and fullness of its topic of interest. Because of the kind of knowledge produced by qualitative research, it is grounded in a different ontological and epistemological base than quantitative research. Understanding and practicing qualitative research requires that students do not simply transfer quantitative research principles to qualitative studies, but approach gaining competency in qualitative research from within its own perspective. There are two levels of competency in qualitative research – the basic level and the expert level. Basic level competency includes knowledge about qualitative research including its philosophy of knowledge, its area of study, the tools and techniques it uses, and its traditions. A student who achieves a basic level competency should be able to read and understand a qualitative research report. Expert level competency is an advance beyond the basic level in that, in addition to understanding, it concerns mastery of the skills needed to conduct a qualitative study. These are practice skills and include mastery of in-depth qualitative interviewing and observation, mastery of analytic skills of data in linguistic form, and mastery of communicating results transparently. Mastery of expert competency is achieved by advancement through various stages of skill development to reach a level of expertise. A student who has achieved expert competency should be able to conduct a worthy qualitative study.

The term *qualitative research* refers to a collection of linguistically based social science research approaches that focus on the study of the human experiential realm. The modern-day practice of qualitative research can be traced to its emergence in the 1970s as part of a reform movement in the social sciences (Schwandt, 2000). The reformers were interested in studying the meanings and values through which people understood and made sense of their encounters with the world, with others, and with themselves. They held that the then current mainstream social science methods, with their commitment to a numeric form of data and to statistical analyses, were inadequate for understanding human existence as it was experienced by persons. The reformers proposed that a research approach that was language-based, rather than numeric-based, would allow for deeper and more nuanced knowledge of human experience. In their development of language-based research, the reformers retrieved and revised earlier attempts at such a research, for example, anthropological field studies and University of Chicago symbolic interaction studies. In the decades since 1970, qualitative- or

linguistic-based research has become an important component in the repertoire of social science inquiry methods.

16.1 Overview

Since its re-emergence in the 1970s, qualitative researchers have developed multiple linguistic-based approaches to the study of the experiential realm. They have produced a diverse set of procedures and tools for their inquiries. Already by 1990, Tesch (1990) could list 46 terms used to refer to various qualitative approaches. As textbooks on qualitative research began to appear, the variety of approaches was culled down to the eight or so most used. For example, Camic, Rhodes, and Yardley (2003) in their *Qualitative Research in Psychology* include chapters on discourse analysis, narrative psychology, grounded theory, phenomenological psychological method, ethnographic methods, and action research. Although textbooks have often treated the field as if it were a collection of different intact methods, an alternate treatment whose focus is on the theory and principles underlying the diverse approaches is possible. When looked at as various, distinct methods, competency in qualitative research would consist of mastery of several of the methods. However, when the field is viewed as a common enterprise based on shared assumptions about how to study the experiential realm, competency involves understanding the rationales that inform the linguistic processes used across the various methods. From this perspective, the different approaches to data generation and analysis that are called for in the various methods are seen as ssimply alternate ways to implement the principles of a language-based approach to the study of human experience (see Patton, 2002). In this chapter, the basic competencies in qualitative research are identified as understandings of its principles and rationales. Expert competencies are defined as including the mastery of the skills needed to carry out qualitative studies.

The number of social science research projects aimed at the study of the experiential realms employing a qualitative approach has increased each decade since the 1970s. This increase has primarily occurred in the disciplines of sociology, education, nursing, and business (in focus group research). In addition, anthropological studies have turned attention to the experiences of their research participants. Among the social sciences, it is the discipline of psychology that has least employed qualitative approaches in its research in the recent decades. However, earlier seminal works have been produced on psychological topics employing qualitative approaches, for example, James' *Varieties of Religious Experience* (1902), Freud's case studies (e.g., 1895/1966), Piaget's theory of cognitive stages in children (1954), Maslow's hierarchy of needs (1943), Kubler-Ross' *Death and Dying* (1969), and Greenberg's (Hanna Green) *I Never Promised You a Rose Garden* (1964), a case study about the experience of schizophrenia.

In recent decades, the use of qualitative approaches in psychology has progressed more in European psychology (especially in Great Britain and Scandinavia) than in American psychology. American psychology has, in general, retained cautiousness about the use of qualitative research. For example, the proposal in 2007 for a new division in the American Psychological Association for qualitative research was not approved. Nevertheless, the use of qualitative approaches in American psychology, especially in counseling psychology, appears to be increasing. Ponterotto (reported in Azar, 2008) noted that over the past 12 years the proportion of qualitative studies published in mainstream counseling psychology journals increased from 13% to 18% and that qualitative approaches make up 10% of psychology dissertations.

The largest increase in publications based on qualitative methods, however, has occurred in social science disciplines other than psychology. The demand for textbooks on how to conduct qualitative research has increased dramatically during the last 4 decades. Sage publications has been the leader in producing these textbooks and now has an extensive library devoted to qualitative research, for example, its three editions of the *Handbook of Qualitative Research* (Denzin & Lincoln, 2008), an edited volume on qualitative research practice (Seale, Gobo, Gubrium, & Silverman, 2004), and Creswell's popular textbook (Creswell, 1998). Most of the textbooks are not discipline-specific, but address the general use of qualitative methods.

However, there have been textbooks published that address the specific use of qualitative research in psychology. To date, most of these have been authored by British psychologists. Included among these texts are: Banister, Burman, Parker, Taylor, and Tindall's *Qualitative Methods in Psychology* (1994), Willig's *Introducing Qualitative Research in Psychology* (2001), Smith's *Qualitative Psychology: A Practical Guide to Research Methods* (2003, second edition, 2008), Parker's *Qualitative Psychology: Introducing Radical Research* (2005), and Willig and Stainton-Rogers' *The Sage Handbook of Qualitative Research in Psychology* (2008). In addition, the British journal *Qualitative Research in Psychology* began publishing in 2003 (David, Gough, & Parker, 2003–2008). Written in English, this literature has been adopted by American psychologists. An early publication by American authors was *Qualitative Research in Psychology* (Ashworth, Giorgi, & de Koning, 1986). Appearing more recently is the important edited volume *Qualitative Research in Psychology* (Camic et al., 2003) by the American Psychological Association.

16.1.1 The Realm of Inquiry for Qualitative Research

Qualitative approaches are specifically devised to study the human experiential realm. The experiential realm is a production of people's brain activity, but while neurological studies focus on where in the brain various activities take place, qualitative studies focus on the experiential content generated by these activities (Petitot, Varela, Pachoud, & Roy, 1999). The generated content includes people's thoughts, understandings, emotions, beliefs, remembrances, imaginations, perceptions, and other mental performances. Although the term *experiential* can be used to refer only to perceptual products, in qualitative approaches it is used to refer to all the productions of mental activity. People have the capacity to be aware of some of their mental activity, but not all of it. At times, the term *consciousness* has been used to connote the experiential realm. However, *consciousness* has also been used to refer to only the productions that appear in people's awareness. In this chapter, I will use *consciousness* in the broad sense to refer to all the products of mental activity whether or not they are available to awareness (Thompson, 2007).

One of the activities of the experiential realm is the presentation to awareness of the objects and activities of the external environment. Since the publications of Kant (1781/1965), it has been recognized that the phenomena that appear in awareness are not simply mirrored reflections of objects in the external world; rather, they are the products of mental activity which organize and consolidate sense data into the recognizable objects that appear in consciousness. The world that appears in human consciousness is the result of specific human processes and differs from the world that appears in other species (e.g., the world as experienced by bats, Nagel, 1970). Jonas' (1966) study of the particular sensory apparatus through which human

beings interact with the world limits and focuses the received perceptual data available to people's mental construction. Thus, the experiential realm, which is the focus of qualitative study, is composed of constructed appearances representing the things in the world. In everyday experience, people's focus is turned toward the things in the world that are represented by their appearances in consciousness, not to the things themselves. Husserl called this focus the *natural attitude* (1937/1970). The study of the experiential realm requires the refocus of attention to the appearances themselves.

These appearances do not show up in consciousness as isolated and meaningless perceptual fragments. Instead, they show up as meaningful in relationship to their effect on accomplishing tasks and fulfilling desires. Which meaning is embedded in an appearance is derived from the effect of past similar appearances and the personal and social context in which they show up. The appearances in consciousness include more than the presentation of current perceived objects; memories and imaginations also appear as well as thoughts. Qualitative studies have most often focused on the meanings that accompany the appearances in people's consciousness. Different people may understand the meaning of the same appearance in different ways depending on their experiential social environment and personal histories.

Individuals, because of their unique life-events and various interactions with others, can attach their own exclusive meanings to appearances. For example, one person, who had been previously bitten by a dog, when seeing a dog approaching interprets its appearance as threatening and moves away; another person, who has a dog as a pet, interprets the dog's appearance as pleasantly appealing and may reach out to touch the dog. Meaning-giving, at times, depends on a person's practical needs. If a person needs something to keep the wind from blowing his or her papers off the desk, a large book sitting on the desk may be understood as a possible paper weight; without the need, the book may not be noticed. The significance of what meaning people give to their appearances is that their actions follow from the meanings they give to them. Human actions are not simple reactions to stimuli, but are responsive to the meanings that people connect to the appearances of the events and happenings in their lives.

In addition to personal experiences, people make use of the meanings assigned to appearances by their social environment. Cultures supply a common core of meanings to be linked to particular appearances. These cores vary among cultures, and people from one culture may identify the meaning of an appearance differently from people from another culture (Lakoff, 1987). For example, in some cultures the experience of having a sitting person show the soles of their shoes is insulting; although in other cultures exposing one's soles has no meaning. People who are members of a culture share a large overlap about what meanings are to be attached to various kinds of events and happenings. The overlap provides a shared interpretation of similar appearances and, thus, allows people to understand one another.

People's experiential realms are not things; they are historical processes and their primary dimension is time. They are continuously engaged in making meaningful what appears. Appearances stream and flow into people's experience as they encounter their physical and social environments, remember past experiences, and engage in imagination (James, 1890/1950). But as new experiences occur, they, along with the meanings and emotions attached to them (Damasio, 1994), are retained. Consciousness is not simply a momentary phenomenon consisting only of immediate appearances flowing by on its surface. Rather, it has a temporal depth made up of its accumulated experiences. The experiences are not stored as merely one thing after another, but they become somewhat organized into inter- and multi-linked configurations. The work of the experiential realm includes the organization of appearances as well as

their production. New appearances are given meaning by becoming linked to stored experiences of a similar kind. Thus, over time, people come to build a reservoir of somewhat consistent interpretative patterns used to assign meaning to the various types of events and happenings that appear. As ever new appearances enter into experience, they are used to refine or reorganize the operating patterns of interpretation into finer levels of distinction.

People's experiential realms present appearances in different modes – perceiving, remembering, and imagining. At times the focus of attention is on memories of past appearances. Past experiences are recalled and reexamined, not only for review of what happened in the past, but also to reinterpret the past in the light of subsequent events. Sometimes memories appear in awareness without the effort to recall them. Some of these are filled with disturbing emotional content and it is difficult to repress them out of awareness (Ricoeur, 2004). Consciousness can also engage itself in the construction of imagined scenarios. Often possible actions are played out in imagination before deciding what to do to achieve a desired result. A person's experiential realm moves seamlessly through these various modes, and, at times, it appears to be operating in different modes at the same time.

16.1.2 Studying the Experiential Realm

Studying people's experiential realm is problematic. As a mental phenomenon the kind of reality it is has different attributes than those of physical things. Physical things are available for public inspection through the senses, either directly or inferentially with instruments such as cloud chambers and temperature gauges. A person's experiential realm is not available for public inspection and, therefore, it cannot be known objectively (i.e., agreement by two independent observers about what is seen). It is also a complex phenomenon consisting of the activities that produce the objects and meanings that appear in consciousness. Only the person whose consciousness it is can observe, although only partially, his or her experiential processes and contents. Despite the difficulties in investigating people's experiential realms, it is that aspect of human existence that is of greatest importance for understanding human beings. Study of the realm displays the ways the physical world, the social environment, other people, and one's self appear in a person's life and the perspective from which a person interacts with them. Husserl (1937/1970) called people's experiential realms their *life worlds* distinguishing it from the world as it is independent of people's experience.

The life world is the world of personal consciousness in which people conduct their lives. People's emotional responses, decisions, and actions are based on the meanings given to what appears in their experiential realms. Thus, understanding people's life worlds is central to understanding human beings and, therefore, is of fundamental interest to psychology.

The discipline of psychology began as the study of the experiential realm. In the early decades of psychology, its research interests concerned the relationships between changes in the physical environment and changes in perceptual experience. Physical stimuli were altered and participants were asked to report what they experienced. It was established that stimuli, such as audition and vision, have to reach certain intensity before they make an appearance in a persons' experience. The studies also found that changes in the magnitude of stimuli were not apparent in experience until they passed a certain threshold (Fechner, 1860/1966). Although Wundt continued the experimental research on the relation between changes in stimuli and changes in experience, he believed this research could study only immediate experiences, but

such research could not give access to deeper mental processes such as thinking, attention, and mental synthesis. In his ten-volume *Völkerpsychology* (1900–1920), Wundt's studies of these deeper processes employed historical analysis, naturalistic observation, and attention to language usage (Hergenhahn, 1997). Brentano (1874/1995) agreed with Wundt that the search for mental elements implied a static view of the experiential realm. He developed a psychology that approached the mental realm as consisting of the activities of judging, feeling, and valuing, which he called *act* psychology. Brentano employed a method of "inner viewing" to study the activities of the experiential realm.

Early American psychology did not adopt Wundt's and Brentano's interest in the deeper, integrated productions of experience, but focused instead on identifying the static experiential elements (Titchener, 1896). In reaction to the search for elements, some psychologists (e.g., James, 1890) began to study the functions of the experiential realms' processes in aiding the human organism to adapt to its environment. However, with the advent of behaviorism and adoption of the unified science model of research, study of the experiential realm was abandoned. The behavioral model of research limited study to only those aspects of reality that were publically observable. Although behaviorism recognized the existence of people's experiential realms, it looked on them as "black boxes" because knowledge about them could not be acquired by the methods of their science. What was publically observable (i.e., what was objective) about humans was the relation between the stimuli that affected them and their bodily responses. In the 1960s (see Gardner, 1985), psychology renewed its interest to what was happening in the "black box," that is, it turned to the study of cognition and experience. The invention of the computer provided a model for how the experiential realm operated. Although psychology's cognitive turn opened up this non-publically observable realm for study, the model of science that guided behavioral research was retained.

A basic problem for research directed at the experiential realm is that researchers do not have direct access to participants' experiencing. Because participants do have partial access to their own experiencing, a solution to the research problem is to have participants produce languaged descriptions about their experiencing. Languaged descriptions offer only an approximation of participants' actual experiencing. It is difficult to establish the accuracy or completeness of descriptions because they cannot be compared to the experiencing itself. Thus, the production of the descriptions is subjective in that they are the personal views of participants on their own experiences. However, once produced, the descriptions themselves are open to public observation and can be treated as "objective" data. Research becomes transformed from study of the experiential realm to study of descriptions about the experiential realm. The data that serve as evidence in the research are the descriptions themselves.

When mainstream psychology turned to study of the experiential realm, it continued to employ the model of science that had guided behavioral research. The model assumed that scientific knowledge took the form of relationships among variables. Whether or not a relationship held between variables could be determined by submitting a proposed relationship to statistical testing. Such testing required prior selection of variables and a way to establish scores representing varying amounts of the variables. Then items or participants are examined to establish scores that represent the amounts of the variables they possessed. The collections of scores on the variables are then presented to statistical testing. The testing exposes whether or not the projected relationship is affirmed by the collected scores. Statistical tests operate by calculations of information in numerical form. This model of knowledge and its method of

testing relationships were retained by mainstream researchers for study of the experiential realm. The model required that participant's descriptions of their experiences be about selected variables and be gathered in numeric form. Or, if the descriptions were originally given in linguistic form, that they be translated into numeric form. The use of scales (e.g., Likert scales) allowed for participant descriptions to be recorded directly in numeric form. The use of codes by raters permitted the translation of descriptions originally given in languaged form into numbers. Relationships among the variables in experiential realm are tested by statistical procedures.

Qualitative research, with its interest in the study of the experiential realm, was part of psychology's cognitive turn. However, qualitative researchers proposed that simply adapting the mainstream model of knowledge development to the experiential realm was not adequate to deal with its unique attributes. Qualitative approaches are presented as an alternative model of knowledge development for the experiential realm.

There are important aspects of the realm that are difficult to grasp when parts of it are abstracted out in the form of measurable variables. The depth and breadth of the realm are complex and dense, and the meanings of its contents are derived from their connectedness of other experiences. The relationships among its contents are not static and permanent; rather, they are realigned as new experiences are incorporated. Describing these relationships as fixed and expressible in mathematical formulas covers over the flux and evolving characteristic of the realm. Also the content of the realm varies across individuals in irregular ways. Although there are shared contents related to people's common biology and their internalization of culture, each person's experiential realm has additional unique characteristics. Small differences in people's life events and happenings, as well as the order in which they occurred, can produce significant differences in the meanings people attach to their life events. These individual differences are not often distributed in a normal variation around a mean; thus, making inferences of population characteristics of the experiential realm from random samples is dubious at best. In order to study the experiential realm in its depth and interconnectedness, qualitative researchers have proposed new inquiry approaches that use natural language as data and linguistic-based analytic tools. To emphasize that qualitative researchers employ a different approach to knowledge generation than that used by mainstream researchers, they often refer to their research as *inquiries*, *studies*, or *explorations*. Nevertheless, because qualitative approaches seek to generate appropriate knowledge about the human realm and make use of empirical accounts and reasoned arguments, I will identify them as a type of *research* in this chapter.

A problem for both mainstream and qualitative researcher is how to make participant descriptions more closely represent the processes and contents of the experiential realm. Qualitative researchers maintain that the attributes of natural language are more able to represent participants' experiential realm than variable scores. Thus, qualitative researchers generate data by gathering languaged descriptions about an aspect of a single person or several persons' experiential realm that is the topic of the investigation. They thoughtfully examine and analyze these descriptions to produce a synthesis that uncovers the structural constituents that coordinate the descriptive elements. The descriptions are produced by participant interviews, researcher observations, document searches, and examining photographs and videos. The worth of the generated descriptions depends on the skill and talents of the researcher for noticing and drawing out nuanced and comprehensive descriptions about an experience. The process of generating a qualitative text is not rule governed and lacks the exactitude of the

administration of a survey questionnaire. The analysis and synthesis of the text also depends on the researcher's ability to conceptualize and notice patterns.

The competencies of qualitative research can be divided into two levels: basic competencies and expert competencies. Basic competencies are concerned with knowledge about qualitative research including its theories and principles and its history and traditions. Mastery of the basic competencies is demonstrated when one is able to read and understand qualitative articles. Expert competencies are concerned with mastery of the skills required to carry out a qualitative study. Mastery of the expert competencies is demonstrated by ably conducting and reporting a qualitative study and by the production of a critical evaluation of a qualitative study.

16.2 Basic Competencies

One who has mastered the basic competencies of qualitative research: (a) will know and understand the principles that guide the conduct of qualitative research; (b) will know and understand the rationales that inform the processes used by qualitative researchers to generate data, to analyze and synthesize the data, and to communicate results; and (c) will know about the history and traditions of qualitative research. ❯ Table 16.1 provides an outline of the basic competencies for understanding qualitative research.

16.2.1 Theory and Principles of Qualitative Research

The theory of qualitative research is based on the premise that the processes and interactions within the experiential realm more closely resemble those operating in naturally spoken languages than those operating in mathematical functions. This premise underlay the kind of data it gathers, the kind of analysis it uses, and the way it frames its reports. Three topics make up this theory section: (a) Differences between linguistic- and numeric-based research, (b) language and the study of the experiential realm, and (c) the place of researcher bias.

◻ **Table 16.1**
Basic competencies – understanding qualitative reports

Area of competency	Sub-competencies
Theory and principles	Linguistic and numeric data
	Properties of language
	Views on bias
Rationales for processes	Data generation
	Analysis-synthesis
	Communication of results
History and traditions	Grounded theory
	Ethnography
	Phenomenology

16.2.1.1 Differences Between Linguistic- and Numeric-Based Research

Qualitative research operates by a different set of principles of inquiry than those that direct inquiries using statistical analysis. Quantitative studies collect or transform information into numbers. In part, this choice is informed by a philosophical position that reality is ordered in a manner that can be described best mathematically. In addition, data in numeric form are required in order to use the descriptive and inferential power of statistical analyses. These analyses provide numeric relationships among groups of scores and can produce a probability estimate that the mean score of a population of scores can be inferred from a randomly selected sample scores from the population. Qualitative studies generate information in the form of spoken and written naturally used language. This choice is based on the idea that certain areas of reality – for example, the experiential realm of human beings – are more closely organized on linguistic, rather than mathematical principles. Linguistic principles of organization allow inter-relationships of meaning to be grasped by conceptual hierarchies and by metaphorical relationships of similarity. Data in linguistic form require their own type of analysis-synthesis processes for producing a comprehensive and comprehensible understanding of the generated data.

One of the most difficult problems in attaining competency in the theory of qualitative research is the background assumptions students hold about what constitutes "real" research. The prior understandings about research by many students are derived from their prior schooling and quantitative research classes. These classes have emphasized that researcher involvement with participants will bias the data, that to count as knowledge findings must be generalizable, that following a method will assure a valid outcome, that replications of a study will produce the same findings, that there is one proper way to assure a causal relationship – the gold standard of random experimentation, etc. When qualitative research is judged using these assumptions, it does not fare well. A response to these assumptions that appears sometimes in qualitative studies is to try to make qualitative research "be more like" quantitative research. Attaining competency in the qualitative principles of inquiry involves coming to understand that qualitative approaches produce a different type of knowledge than that produced by quantitative studies. The qualitative focus is on developing intensive knowledge about individuals rather than about populations. Qualitative knowledge does not provide an answer as to whether or not a hypothesis is supported by gathered data. Qualitative knowledge qualitative demands intensive interaction with participants who have been intentionally selected for their particular experiences.

The kind of knowledge produced by qualitative research is related to the kind of understanding one has about how a friend is experiencing an event or happening. It has a kinship to the knowledge gained by clinicians about the manner in which clients understand and approach their life events. A well-done qualitative study can enlarge the sensitivity of clinicians to the possible range and complexity of clients' experiences. The findings of qualitative research are not simply intended as accurate descriptions of participants' experiential realms, but are meant to offer lenses through which others can look to notice possible experiential subtleties and nuances. In this way, the findings or what is learned in a study serve to sensitize one to notice differences and variations in people's experiences of similar events. Thus, qualitative research can encourage looking below the surface impressions of people's experiences. The conceptually refined lens offered as a qualitative finding can bring to the foreground aspects of another's

experiential realm that had been an unnoticed aspect resting in the background. In this way, qualitative findings serve as instruments of disclosure.

Qualitative findings function in a way similar to findings offered by a creative examination of a literary production. For example, in an analysis of Shakespeare's *As You Like It*, it may be argued that a theme of the play is the contest between the agrarian way of life and the emerging urban life style at the turn of the sixteenth century in England. The examiner provides text from the play, from other works of Shakespeare, and from the historical period to demonstrate the operation of the theme. Using the examiner's findings as a guide, one might now notice how the theme is operating in the play. In previous readings, the reader may not have noticed the theme; but looking through the lens of the examiner's interpretation, passages that had been passed over in previous readings, now become meaningful. The findings have allowed for an increase in the understanding and meaning of the play. Learning about the operation of the deeper theme in the play can also lead a reader to look for such themes in other plays of Shakespeare.

The findings are not a projection on the play by the examiner. They are based on evidence from the text, from comparisons with other texts, and from historical documents. The legitimacy of the findings is dependent on the reader's recognition that the agrarian–urban theme actually shows through the text. What was not noticed before now becomes apparent. What is transferable about the finding is the possibility that the agrarian–urban theme may appear in other plays; that is, it is something that could be looked for. Or more generally, one could look to see if themes of a different kind are operating in other plays.

Qualitative research is a rational enterprise. It employs cognitive processes, such as contrasting and comparing textual elements, and it makes and defends inferences by demonstrating that the conclusions it offers about the meanings and patterns are supported by the data elements in the descriptions. The kinds of reasoning processes used in qualitative analysis differ from those that compose mathematical reasoning; nevertheless, they are part of the common stock of cognitive inferential tools used by people to gain understanding of the meanings and values experienced about themselves, others, and worldly happenings.

16.2.1.2 Properties of Language and the Study of the Experiential Realm

Qualitative research tools are designed to generate and analyze–synthesize linguistic data. The organization and relationships of the experiential realm more closely reflect the properties of languages rather than mathematics. Language relates to auditory knowing and has distinctive features that differentiate it from visual knowing. Beginning with the classical Greek philosophers, western culture has assumed the primacy of visual knowing. It is through the visual sense that we come to know what is real. The superiority of visual knowing is expressed in the value contemporary science places on data that can be publically observed. Levin's (1993) edited volume traces the hegemony of visual knowledge in the metaphors used to talk about knowledge. When we to want to express that we know what someone meant, we say *I see what you mean*; when something is understandable, it is *clear*; a profound remark is *insightful*. In spite of the wide spread use of visual metaphors to expression knowing through all of the senses, differentiating the attributes of auditory knowing from those of visual knowing can assist in "clarifying" qualitative principles.

The descriptive data generated by qualitative research is in linguistic form. Understanding these data draws on the attributes of auditory knowing. Language is at base an auditory

phenomenon. It is first of all spoken and heard and is known through the auditory sense. Even written texts are representations of auditory communication. In the phonetic-based alphabets, the written letters stand for the spoken sounds. Thus, when interview data are transcribed, they retain their auditory attributes. Auditory knowing is primarily interpretative. Its knowledge is not about the sounds that are sensed, but about the meanings the sounds stand for. Moving from the hearing of sounds to the realm of meanings they point toward includes knowing how the language being listened to has linked certain noises to meanings. A language's first level of relating sounds to meanings is the combining of sounds into words. When listening to someone talk in a language not known to the hearer, the words that are heard are devoid of meaning. Except for a few onomatopoeic words – such as *bow-wow* and *meow* in English – sounds have no intrinsic relation to the meanings they represent. The meanings referred to by words are a function of its relation to the other words in its language system (Saussure, 1907–1911/1966). In addition to words, languages contain grammars that generate meanings by combining words into kinds of sentences. For example, a propositional sentence communicates meaning about a state of affairs (*He is sad.*). Sentences can be combined into prose paragraphs to express relations among state of affairs (e.g., the narrative *He is sad. His father died*).

Ferreting out the meaning of any particular expression is a complex mental operation, although it is an everyday accomplishment. Words have a flexible relationship to the realm of meanings. The meaning intended by an expression depends on the context in which it is used. Auditory knowing takes into account the particular situation, the historical setting, the intonation, and style of the speaker, and other considerations in understanding the meaning intended by a speaker's utterance. Knowing what an element of a description means requires knowing its relation to the whole description; and knowing what the whole description means requires knowing the meaning of its elements. Interpreting a description involves the to-and-fro from parts to the whole and whole to the parts. Taking part in the process of producing and understanding by moving back and forth from parts to the whole is termed entering the *interpretative or hermeneutic circle*. The attributes of flexibility and context dependence of the auditory knowing of the meaning of a languaged expression distinguish it from the attributes of sameness over time and context independence that serve visual knowing.

16.2.1.3 Views on Researcher Bias in Qualitative Research

It is a tenant of mainstream research that findings are to be unbiased and objective. Anyone who studies the same phenomenon should come to the same conclusions. Findings are to be protected from the influence of researchers' cultural backgrounds, personalities, desires, and expectations. When any of these factors affect a researcher's findings, the findings are considered biased, and, thus, are unworthy. Many of the rules and methods for conducting mainstream research are intended to separate researchers from their personal perspectives and expectations so as not to influence the responses of research participants. The goal is to produce data that represents real differences in participants' responses, not differences in the stimuli or treatment. For example, in double-blind experimental research neither the administrators of a treatment nor the participants know whether they are receiving the active or the placebo treatment. In survey research presentation of the question is to be constant across participants to eliminate the effect of differences in questioner dress, gender, voice inflection, etc. on participant answers (Mishler, 1986). Findings are said to be objective when they are undistorted by

the researcher's personal perspective; they are said to be subjective when they are a consequence of the researcher's perspective.

In qualitative approaches, researchers are directly involved with participants in data generation. The qualitative interview is a person-to-person interaction and the statements given by participants are influenced by the way questions are asked and by what is asked. Unlike the administration of survey questionnaires, questions in qualitative interviews arise in the flow of the interview and are tailored to the situation. In addition, the personal style of the interviewer, the occasion, and the setting influence participants' descriptions. Because of this close interaction, qualitative interviews are described as co-creations between researchers and participants. However, it is the personal involvement, whether in interviews or in observations, that is necessary to generate rich and robust descriptions that include the complex and layered interactions that are part of the experiential realm.

Qualitative researchers also affect the outcomes of the analysis-synthesis processes. Unlike statistical analysis, which is performed by a computer, the analysis-synthesis of linguistic data is performed by the researcher. It is a process that depends on the skill and persistence of the researcher. The organization of data into meaningful topics and patterns depends on the researcher's insightfulness and creativity. Although techniques have been developed to assist researchers in the analytic process, the quality of the findings depends on researcher characteristics.

Because qualitative researchers are involved in the data generation and analysis-synthesis process, qualitative findings inherently are open to researcher influence and bias. Within qualitative research, there are different positions on how to deal with the operations of researcher bias. The positions line up on a continuum from the attempt to eliminate as much bias as possible – positivism – to acceptance of bias as an aspect of all research – constructionism. Those closer to the positivist position use techniques such as member checks (participants' review of their interviews to verify that the interview accurately reflects what they meant) and expert reviews of the researchers' analyses-syntheses findings (expert researchers' review and agree that the findings are faithful renditions of the data). Closer to the middle of the continuum are researchers who recognize their possible influence, but expect that by being aware of their prejudices and positions they can avoid them. Those who hold this position include a section in their reports, usually called *reflection*, where they describe how the possible influences their backgrounds and assumptions could affect their findings. Toward the constructionism end of the continuum are those who hold that all knowledge reflects the values and assumptions of the researcher and is a construction of the method used. They view findings as what are noticed from the particular perspective of the researcher through the lens of his or her method. Findings are not objective in the sense that anyone who would investigate a topic would arrive at the same results; but, rather, a finding provides a description of aspects of the topic noticed from the subjective perspective of the researcher. Such aspects may not have been noticed from the perspectives of other investigators. Constructionist findings invite the reader to view the topic from the perspective of the researcher.

Readers can recognize the position taken by researchers regarding the role and affect of bias in qualitative studies by the manner in which knowledge claims are stated. Claims that state that the findings represent what is actually the case about the experiential realm are closer to the positivist pole; those that state that findings represent the researcher's view are closer to the constructionist pole. Historically, qualitative research has tended to move from the positivist toward the constructionist pole (Charmaz, 2000; Corbin & Strauss, 2008).

16.2.2 Rationales and Purposes of Qualitative Research Processes

The rationale for the processes used in qualitative research is based on its commitment that the experiential realm is better understood linguistically rather than mathematically. Qualitative approaches operate within a linguistic milieu. They gather and generate a variety of linguistic descriptions about the aspect of experience that is the topic of the study. They carefully analyze these descriptions using techniques and tools appropriate for clarifying and refining the understanding of texts. They then communicate and justify the derived understanding through linguistic-based arguments.

16.2.2.1 Data Generation

The purpose of qualitative data is to provide a basis for increased understanding of aspects of the participants' experiential realms that are being studied. To serve this purpose, the data need to be descriptions that are rich in detail, vivid, and nuanced about instances when participants experienced the feeling or response under investigation. The data should contain fully articulated, concrete examples of instances when participants had the experience. Participants' commentaries about the topic under investigation are much less helpful than amply fleshed out examples that include the context and content of the studied experience. For the analytic work to produce a well-developed description of the attributes of the investigated experience, its data need to be a collection of robust examples of the occurrences of the experience. Generating data consisting of brief answers to a list of pre-designed questions or brief interviews does not provide enough detailed information to interpret the meanings embedded in the data.

The problem faced by qualitative researchers is to generate information that more closely and fully reflects the operations and content of consciousness. One concern about participants' descriptions is the limit of their access to their own experiential realm. Not all the activity of consciousness is present in or available to people's awareness. Freud located aspects of mental activity that were unavailable directly to awareness, and Derrida (1990/2003) criticized Husserl's idea that all the operations of a person's consciousness were available to his or her own reflective inquiry. In addition, much that participants are asked to report about concerns past experiences; but the activity of recollection does not reproduce mirrored images of past experience. Recollections are reconstructions filling in with details that were not part of the original experience and leaving out parts that were included in the original experience (Polkinghorne, 2005). However, people do have the capacity to observe aspects of their own present conscious activity and to bring into their awareness pre-conscious and remembered activity. An analogy used by Merleau-Ponty (1945/1962) to describe access to one's own consciousness activity and contents involved looking into a deep well with a search light. The light of awareness can only penetrate the darkness to a certain depth; what is beyond that depth cannot show up in awareness, but what can be seen is expressible in language.

Most of the data of interest to qualitative researchers is not simply lying around to be collected and gathered; rather, they require the involvement of researchers to develop or generate it from participants through interviews and careful observations. The qualitative approaches make use of skillful interviewing as a means to assist participants in exploring and reporting their experiences. In the context of open and trustworthy interactions, participants are able, over time, to reflect on and talk about their experiences in some detail and with subtlety. Their

prose descriptions allow for accounts that capture the synergistic relations of meanings within their experiential realms. Qualitative approaches also make use of observations of participants' gestures and actions from which they infer the experiential meanings that informed participant responses to events and happenings. Qualitative researchers are data scavengers and make use of any source that can advance the development of their database. They search documents, emails, letters, photos, and other resources to expand details about the examples of the experience they are investigating. The aim is to capture as much of the subtleties and intricacies of the topic under study as possible.

In qualitative research, the data generation, analysis, and communication processes are not carried out by completing one before beginning the next one. Unlike quantitative research where all the data must be collected before conducting the analysis, qualitative researchers move back and forth among data generation and analysis and preparation of public communication. During a study, each process inter-relates with and informs the others. The analysis of the initial data uncovers aspects and layers of the experience that need further exploration and elaboration. The next round of data collection follows up on the questions raised by prior analytic work. The follow-up may involve re-interviewing or re-observing originally selected participants or sites or selecting new participants or sites to gain further details and examples that fill in the gaps and deepen the developing analysis. There is no built-in rule or formula to determine when enough data have been generated for a study. The notion of saturation, in which additional data are no longer provide new information, has been employed as a means for deciding when enough data have been gathered. However, the notion of saturation has come under criticism (see Morse, 2007). Often, the amount of data generated in a study is influenced by pragmatic concerns about limited resources and time. In general, the iterative movement between data generation and analysis continues until sufficient data are accumulated to allow a concluding substantive analysis-synthesis to be achieved.

The logic of selecting participants to interview and observe reflects the need to produce dense and satiated descriptions of an experience. This requires participants who have had the experience being investigated and who can reflect on and articulate the experience. Selection criteria in qualitative research are not determined by the need to randomly select enough participants from a population in order to calculate the probability that what holds for the examined participants also holds for the unexamined members of the population. Thus, although the term *sample* is commonly used, participants in a qualitative research are not selected to create a random sample of a population. Rather, they are purposefully selected persons who can provide revealing descriptions of an experience. In addition, the number of participants is not determined by a desire to produce statistical significance. The number of participants is decided on by the quality and fullness of the descriptions required to produce an understanding of the topic. If qualitative researchers want to make a claim that their particular findings hold for people who were not part of their study, they need to argue for the extension. The argument needs to establish that the topic investigated is so basic to human experience that understanding its attributes in one or a few people allows the inference that this understanding would hold for all people or for all members of a group. Most qualitative studies are not intended to produce generalized knowledge; instead, the aim is to yield particular knowledge about an individual's or several people's experience. When the study includes more than one person, the findings describe the differences across the participants as well as the common elements.

The gold standard for the selection of participants in a qualitative study is *theoretical sampling*. In theoretical sampling, selection is not done in advance of the study, but takes place as the study is underway. As initial analyses raise specific questions and open up areas of inquiry, new participants are selected who can address these questions and who can add new variations within the studied experience. The quality of the generated data depends not only on who are selected as participants, but also on the amount of time given to the encounters with participants. Seidman (2006) suggests at least three interviews with a participant. He points out how more than a single (one hour) encounter allows for rapport to develop between the researcher and participant and for deeper and richer descriptions to emerge over time. Although theoretical sampling and extensive time with participants yields the most useful qualitative data, practical issues in the actual carrying out a research project have required researchers to use other strategies. Patton (2002, pp. 230–246) describes 16 alternate selection strategies. The data generated in many published studies involved only single, one hour interviews with participants.

For the final analysis, the generated data are transformed into a composite written text. Interviews are transcribed, observation notes collected, selections from documents gathered, and researcher notes and memos are brought together in a single extended text. It is not unusual that the combined text takes up 500–1,000 pages (Kvale, 1996). The assembled text appears as a disjointed collection of various transcribed interviews, assorted observational reports, unstructured notes from other textual sources, and researcher notes and memos. The text presents the data as they were originally generated and retains their original formats. As a composite, it lacks thematic coherence and conceptual order. Although some organizational scheme related to the research topic was developing during the iterative data generating-analysis process, the task of drawing out a clear and insightful description of the experiential topic remains. The need is to develop organizational schemes that will bring together the ideas and understanding of the topic that inhere in the textual mass.

The final assembled large text is the database for a qualitative study, and qualitative findings are the product of the analysis and synthesis of the text. However, there is a gap between the experiential realm itself and data about it, whether the data are gathered in linguistic or numeric form. Because the experiential realm is not open to public observation, it cannot be studied directly; instead studies of it rely on self-reports of participants about their experiences. Thus, what is analyzed in qualitative (and quantitative) research is the content of self-reports and researcher observations, not direct observations of the experiential realm. Quantitative studies may develop constructs about unobservable aspects of the experiential realm – such as self-esteem. Because the experience of self-esteem is not directly observable, instruments are used that produce self-report data in numeric form. These data are considered to represent variations in participants' experienced self-concept. The analysis is of the scores, which are reckoned to correspond to the aspects of participants' unobservable experiential realm. Although the self reports used in qualitative studies are in linguistic form, they share the difficulty that their data are representations of the experiential realm, not direct observations. The concern about data representing participants' experiences is not whether or not they are completely accurate descriptions of experience, but how close their descriptions come in their representation. It is the qualitative research position that languaged descriptions offer the possibility of data that come closer to an adequate expression the experiential realm.

16.2.2.2 Analysis-Synthesis

The purpose of qualitative analysis-synthesis is to glean from the assembled textual examples an essential understanding of the experience under study that will help readers to appreciate the depth and complexity of the experience for the selected participant or participants. When the research interest is in the experiences of various participants, the analysis needs to explicate the common and disparate aspects of the examined experience among the participants. Understanding of an experience does not simply emerge from the text; rather, it is a skilled production by the researcher. It requires multiple careful reviews of the text by the researcher. The researcher needs to tarry and linger over the text so that the less obvious meanings in the examples become noticed. The process involves both breaking down the text into its parts (analysis) and gathering together the parts that are similar under a concept or name (synthesis); that is, the text is decomposed into parts and recomposed into a conceptual understanding. Parts of the originally disjunctive examples take on additional meaning by being understood as instances of a concept or theme; that is, they are understood as kind of something. Producing a new concept or using an existing one that brings conceptual ordering to linguistic data requires a developed capacity of similarity and analogical reasoning (see Vosniadou & Ortony, 1989). The conceptual synthesizing process proceeds by trial and error. Concepts that are thought to link similar data units are tested to determine if the concepts adequately separate the data into meaningful kinds. With each test, the concepts are further refined until a conceptual pattern is constructed that displays the data examples as instances of the organizing concepts.

The synthesizing work continues by ordering the derived concepts into higher-order categories. For example, examples in the data might have been ordered under the concepts *feeling hot*, *feeling weak*, and *feeling achy*. These concepts could then be understood as attributes of the higher-order category *feeling ill*. The synthesis builds a structure that shapes the data into an understandable form. The process of refining concepts and categories until there is a good fit between data and the constructed organizing structure continues until researchers are confident that the result elaborates the experience with sufficient detail and clarity. Often the data are susceptible to being understandable through different constructed structures. A structure that frames the data in an unusual way can often bring into view ordinarily missed aspects of an experience. Rather than employing a preconceived structure from the literature, qualitative researchers are to approach their data with "innocence" and to creatively derive a structure that reveals the experience in a new light. Qualitative synthesis derives a cognitive structure from the collected data that delineates the attributes and relationships that make up the studied participants' experiences.

Data in various qualitative studies have been organized using different kinds of structures. The following are the examples of different organizing schemes. Meeker's (2004) study of surrogate decision makers for dying patients used a stage pattern to describe the changes in roles that the surrogates experienced over time. The roles of the examined surrogates moved from the beginning stages in which they experienced themselves as information brokers between health-care providers and the patient to a concluding stage in which they experienced their role as decision makers about the patient's termination. Martin, Sadlo, and Stew's (2006) study of boredom organized the analysis around attributes that made up their participants' experience of being bored. Carter's (2006) study of positive interpersonal emotions organized his interview generated data into a typology matrix. The matrix included different aspects of these

emotions, different levels of the intensity of feeling, and differences in the directionality of the emotions (directed toward others, coming from others, and shared with others). Of the possible matrix cells, Carter located examples in 45 of the cells in his database. McCabe (2003) studied the process of her grieving after her mother's death using personal journals she had written during the 2 years after the death. She organized her findings around the changing ways her mother appeared in her memory and the fluctuations in the way time was experienced in the recollections of interactions with her mother. She developed a model of grieving in which the relationship with the lost loved one is retained through memories and one experiences an ongoing and positive experience. She compared her model to the DSM-IV-TR (American Psychiatric Association, 2000, pp. 740–741) notion that bereavement which lasts beyond 2 months is pathological. Pak (2006) produced a study that organized her interview data into narrative case studies of three Korean–American women. The stories traced the ways these women experienced the conflict between their immigrant families' values and American values in the choice of and preparation for their careers.

There are a number of computer software programs designed for use in qualitative analysis. They are extensions of word processing programs and allow researchers to manage the large database with which they work (Lewins & Silver, 2007). The software programs do not synthesize the data; the synthesis is the result of the cognitive effort and skill of the researcher. The software does assist the researcher by allowing parts of the text to be cut and pasted under different concepts while retaining their links to their original position in the large text. The software is an extremely helpful replacement for paper-based methods formerly used by qualitative researchers. However, unlike statistical software, qualitative software does not involve simply entering data and pushing keys to direct the computer to produce a structural synthesis (see Fieldling & Lee, 1998; Lewins & Silver).

16.2.2.3 Communication of Results

The purpose of qualitative write-ups is not only to report the results of the analysis-synthesis process, but also to demonstrate that the results fit the assembled data. Write-ups need to include a full description of the data generating and the analysis-synthetic processes that produced the results. The choices made during the conduct of the research need to be spelled out, including decisions made about participant selection and the unsuccessful conceptual trials. The reader should be able to go from the reported structure to the database and see how the structure fits the data. The communication should make transparent the processes used to produce the results. To accomplish this task, it requires a report of monograph or book length. Journal length articles can only be abbreviated reports that do not provide sufficient detail for a reader to confidently accept the reported descriptive structure (Polkinghorne, 2007).

There is a particular problem with reporting qualitative findings in journals using the APA format (American Psychiatric Association, 2000) for articles. The format was developed in the 1960s to organize the write-up of quantitative research. The format assumes that results were produced by mathematical analysis and that there was no need to describe how the analysis produced its results from the data. The format also assumes that all the data will be gathered before the analysis. The APA journal format works as a short-hand approach to reporting quantitative research because it assumes that readers have a background understanding of how quantitative studies produce results (Bazerman, 1987). Qualitative researchers, however, need

to explain what they did and why and to spell out the trials and errors that occurred in developing a synthesis. They also need to demonstrate that the structure is derived from the data by including data examples in the write-up.

16.2.3 History and Traditions of Qualitative Research

In addition to comprehension of the theory and principles of qualitative research, the basic competencies include factual knowledge about its historical development. The mainstream social science environment of the late 1960s into which the qualitative research re-emerged was committed to a unified view of science; that is, there was only one kind of knowledge that could be called *scientific* (Hempel, 1965). Scientific explanations were those that accounted for people's behavior by understanding it as governed by a general law. The accepted method for establishing such laws was to propose a possible law (hypothesize) and deduce from the hypothesis what people's behavior would be like if the hypothetical law actually operated. Then collect data to determine if the observed behaviors matched those predicted by the hypothetical law. If the observed behavior was what was predicted, then the hypothesized law was confirmed and added to the inventory of scientifically established laws (Smith, 1986).

The problem confronting the renewal of qualitative research was acceptance by the mainstream as a viable and legitimate alternative means to produce knowledge. Addressing this problem has remained an important part of the history of qualitative research literature (e.g., Giorgi, 1970a; Polkinghorne, 1983). Over the decades since its renewal, qualitative research has gained acceptance in the social sciences as an alternate, although not equal (see Shavelson & Towne, 2002) approach to research. The early strategies for gaining acceptance were to adapt qualitative research so that it appeared more like mainstream research. For example, mainstream terms, such as *data*, *sampling*, *analysis*, and *validity* were employed to describe qualitative processes, which resembled, but were not the same as, mainstream processes. The monograph format for reporting qualitative research was converted to the APA journal format. Recent qualitative literature has been less concerned with justifying the qualitative approach and more concerned with clarifying its principles and increasing the skills of its practitioners.

Basic competency in the history and traditions of qualitative research includes knowledge of its development in three social science disciplines – sociology, anthropology, and psychology. Over time, processes that were developed in one of these disciplines have been used in other disciplines and have lost the disciplinary identity. They have become available as implements for use by qualitative researchers of all disciplines.

16.2.3.1 Grounded Theory – Sociology

With the renewed interest in the study of human experience in the late 1960s, there was concern to find an acceptable research method that would accomplish the task. In 1965, Glaser and Strauss published a study on nurses' experiences of the death of a patient using a qualitative approach. Two years later, they published *Discovery of Grounded Theory: Strategies for Qualitative Research* (Glaser & Strauss, 1967), which described the method they had used in the 1965 study. Glaser and Strauss were professors at the University of California medical school in San Francisco, and their publications provided an early legitimacy to qualitative research as well as

a method for conducting it. In subsequent years, both Glaser and Strauss have published a series of books elaborating procedures for generating and analyzing qualitative research (see Bryant & Charmaz, 2007a). Strauss published three editions of *Basics of Qualitative Research* (Corbin & Strauss, 2008), which is the most widely used text on conducting qualitative studies.

The term *Grounded Theory* was used by Glaser and Strauss to refer both to the product of their research and the techniques they used to produce their results. A grounded theory is one that is derived inductively from data generated about a topic instead of from armchair thinking. The grounded theory process is focused on the generation of theory instead of testing and validating hypothesized theories. Glaser and Strauss introduced the notions of theoretical sampling for data generation and the application of coding for qualitative analysis. Grounded theory research is rooted in the symbolic interactionism (Blumer, 1969; Charon, 2004) perspective in sociology developed at the University of Chicago in the 1930s. Grounded theory originated in the discipline of sociology; however, most or all disciplinary and general textbooks on qualitative research include a chapter on grounded theory.

16.2.3.2 Ethnography – Anthropology

Anthropology engages in ethnographic studies of cultures. In recent decades, anthropology has expanded its studies beyond the investigations of foreign cultures to domestic groups of all kinds (e.g., the classroom and business organizations). Early ethnographic research approached the study of cultures from a third person perspective. Research investigated the rules that informed the behavior of a culture's members in certain preselected spheres of activity; for example, marriage and kinship, ceremony, and leadership hierarchy. More recently, anthropological studies have focused on group members' experiences from a first person or emic perspective. This change of focus was influenced by Geertz' (1973) criticism of the imposition of Western structures on foreign cultures. Geertz introduced the idea of thick description for qualitative data generation. Rather than limiting data gathering to predefined variables, thick description calls for recording the context, strategies, motivations, intentions, and meanings of participants' actions. Anthropological research tools, such as field study and observational processes, have been adopted by qualitative researchers of various disciplines, including psychologists (Griffen & Bengry-Howell, 2008).

16.2.3.3 Phenomenological Psychology

Mainstream psychology has been more resistant to qualitative research than the other social science disciplines. However, one of the principal qualitative approaches, phenomenology, was first developed in psychology. There are two different branches of phenomenological qualitative research – empirical phenomenology and interpretative phenomenology. The first branch was based on the philosophical studies of the structures of consciousness initiated by Husserl in the early decades of the twentieth century (e.g., 1925/1977). Giorgi (1970b) formulated a qualitative research approach making use of methods developed by Husserl; for example, the method of reduction (the focus on the processes and content of consciousness rather than with identifying the properties of the "real" objects that exist in world external to consciousness). While in Husserl's studies, data came from reflections by the researcher on their own experiences, Giorgi

modified Husserl's approach to include interviews of participants about their experiences (see Polkinghorne, 1989). Giorgi hoped that by using interview data his phenomenological research approach would be considered more empirical and, thus, more acceptable to mainstream psychology. Giorgi was a professor at Duquesne University, which served as the center of phenomenological psychology research in the 1970s and 1980s and published the *Journal of Phenomenological Psychology* and annual collections of phenomenological psychology articles.

The second branch of phenomenological qualitative research, interpretive phenomenology, draws upon the existential philosophies of Heidegger (a student of Husserl's) and Merleau-Ponty. The focus of interpretative phenomenology is on the experiences of everyday life events rather than on the basic structures of consciousness. It is concerned about the interpretative meaning people attach to their interactions with other persons and worldly items. The use of interpretive phenomenological research has been prominent in the health sciences (Patricia Benner, 1994).

In current qualitative research, the distinctions between grounded theory, ethnography, and phenomenology are often not maintained. At times, the individual terms have been used to encompass qualitative research in general. Processes first developed in a particular tradition have been extracted and now serve as an amalgam of techniques and tools from which researchers of any discipline can select and use. The selection of what processes to employ in a particular qualitative study is now guided by the needs of that study, rather than its connection to one of the traditional approaches (Patton, 2002).

16.2.4 Summary of Basic Competencies

When these basic competencies are mastered, students will be able to read and understand qualitative research reports. They will be equipped with knowledge of the basic assumptions and terminology of qualitative reports. The kind of knowledge that makes up the basic competencies is propositional; that is, it is factual knowledge about qualitative research. The sources for this knowledge are the qualitative handbooks (Bryant & Charmaz, 2007b; Clandinin, 2007; Denzin & Lincoln, 2008; Gubrium & Holstein, 2002; Willig & Stainton-Rogers, 2008) and textbooks (see Section 16.1) dealing with qualitative research. A valuable source for learning the terminology used in qualitative research is Schwandt's *Dictionary of Qualitative Inquiry* (Schwandt, 2007). The basic competencies could be covered in a one or two semester graduate course.

The basic competencies are not sufficient to conduct a qualitative inquiry or to perform an effective critical analysis of a qualitative study. Carrying out a qualitative study requires development of expert competencies, including the mastery of skills needed to generate worthwhile qualitative data and mastery of skills needed to analyze-synthesize these data. Engaging in a pseudo-study without mastery of the skills can be counter-productive in mastering the theory and principles of qualitative research. Mastery of the expert competencies also enables a student to critically evaluate a study and to propose alternatives that might improve it.

16.3 Expert Competencies

The basic competencies involve propositional knowledge about qualitative research, and with their mastery students are able to read qualitative studies with understanding. For the most

part, reading a report affects only the reader him or herself. However, conducting a qualitative study affects the lives of participants whose time and effort are used. In addition, the results of a qualitative study are presented to the public as a knowledge claim that can be used to assist decision making. Engaging in activity that impacts other people is a significant step up from the solitary activity of reading; thus, it requires a higher order of competencies to assure the production is worthwhile and trustworthy. The higher-order competencies are referred to as *expert competencies* in this chapter because they require mastery of skills and procedural knowledge beyond those that make up the basic competencies. Mastery of the expert or practice competencies occurs at varies levels. These levels of mastery move from the lowest level of novice mastery to the highest level of expert mastery. The term *expert* is used in the chapter to refer to both the area of practice mastery and to the highest level of practice mastery. The areas of practice or expert competencies include mastery of skills involved in the generation of qualitative data, analysis of the data, communication of results, and in the design of a qualitative study. ❯ Table 16.2 provides an outline of the expert competences for conducting a qualitative study.

16.3.1 Levels of Practitioner Mastery

Conducting research is a practice and, as such, requires proficiency in the use of three kinds of knowledge – personal, propositional, and procedural: (a) Personal knowledge is knowledge by acquaintance. Researchers have first-hand knowledge about the processes and contents of their own realm of experience, which they can draw on in conducting studies of participants' experiences. The area qualitative researchers study is not alien or unfamiliar, but is one they already know and talk about. (b) Propositional knowledge is knowledge about facts. Researchers need to know and make use of the facts about the philosophical assumptions, rationales, and history and traditions of qualitative research. The basic competencies are concerned with mastery of the propositional knowledge about qualitative research. However, the expert competencies include mastery of a deeper and broader knowledge of the facts related to qualitative research. (c) Procedural knowledge is knowledge for conducting a qualitative study. This knowledge is practical or "how-to" knowledge whose mastery is demonstrated by skillful performance. All three types of knowledge are needed to produce high-quality qualitative research results.

■ **Table 16.2**

Expert competencies-conducting qualitative research

Area of competency	Sub-competencies
Designing qualitative research skills	Proposed design
	Modifications
Data generating skills	
	Gaining access to sites and participants
	Interviewing
	Observing
Analysis-synthesis skills	
Communicating results skills	

Development of the practice skills used in qualitative research can be seen to progress through a number of stages of mastery. Dreyfus and Dreyfus (1980) developed a model of skill acquisition based on the study of chess players and airline pilots. Benner (1984) adapted their model to describe the stages through which nurses progressed in the development of skillful practice. The model is applicable as a description of the levels of practice mastery through which qualitative researchers can advance. ❯ Table 16.3 lists the Dreyfus and Dreyfus levels of practitioner mastery.

Novice. The novice researcher has learned a set of textbook-provided abstract rules to be adhered to in carrying out a qualitative study. The rules are codified as imitations of what it appears advanced qualitative researchers have done in their studies. Novices focus on correctly following a set of rules and are concerned about whether or not they "did it right." In a sense, they merely go through the motions of doing research rather than actually conducting research. Qualitative studies involve ongoing adjustments and creative decision making in response to the changing circumstances that occur as the study is underway. Simply following a predetermined set of rules is likely to produce poor results. Novices may know what the rule says to do, but they have not attained the skills required to carry out the rule. For example, one may know the rule "conduct interviews with participants," but not have the skills to accomplish the task.

Advanced Beginner. Researchers in the advanced beginner stage have gained experience in actually conducting studies and begin to develop an understanding of aspects of the contexts in which studies are conducted. The researcher begins to operate on maxims of what to do rather than rules. Maxims are principles to be adapted to various circumstances and features in which the research is conducted. For example, the researcher has learned the maxim "make the interviewee feel at ease," and tries to decide what to say to accomplish this for this kind of interviewee.

Competence. As the researcher becomes more experienced, the number of circumstances and features to be noted in deciding what to do can become overwhelming. The problem is to know which of the possible situational differences are important to the conduct of the research. In response to this problem, competent qualitative researchers learn to develop a perspective or plan which allows them to distinguish between which aspects of the study's environment are important and which can be ignored. Researchers operate from a plan of what needs to be attended to in carrying out a particular study to achieve worthwhile results. For example, the competent researchers develop a series of topics they want the interviewee to respond to. These preset topics allow the researcher to recognize when the interviewer is saying something relevant to the study. When the interviewee deviates from the desired topics, the interviewer needs to decide what to do to get them back on topic.

🔹 **Table 16.3**

Levels of mastery of expert skills

Level of mastery
1. Novice
2. Advanced beginner
3. Competent
4. Proficient
5. Expert

Proficient. Performers of research in the first three stages approach the study from a somewhat detached point of view; their attention is focused on deliberating about which maxim to follow or what perspective to take for the study. The proficient researcher becomes more attached and involved in the purpose of the study. Past experiences have become assimilated and function as a large repertoire of intuitive perspectives. Researchers come to perceive the study as a whole rather than as a series of independent steps. From this perspective, the significance and relevance of occurrences during the research process "present themselves" intuitively without deliberative thinking. Rules and maxims have been replaced by situational discriminations. With proficiency, what is salient in the research circumstance stands out; however, determining how to respond requires stepping back from the situation to consider how to respond. For example, an interviewee mentions something about their experience that had not been anticipated. Proficient researchers recognize, without thinking about it, that it may be important to explore further this statement. They then have to step back and deliberate on how they can accomplish this.

Expert. Like proficient researchers, the past experiences of experts have resulted in their capacity to recognize and attend to what is salient during a research process. However, experts, unlike proficient research practitioners, are able to see immediately how to respond and to have the skill required for the response. Experts are not only able to recognize that an off-hand remark by an interviewee opens up an area for further exploration, but is also able to respond at the time in a way that leads the interviewee to discuss the area in more detail.

There is a discontinuity between the competent level and the proficient and expert levels. Up through the competent level researchers approach a study as if were a series of disconnected steps. Their attention is focused on their own actions, which keeps them from becoming immersed in the study. In advancement to the proficient level, researcher attention is focused on the study as a whole. From all that is going on in a study, they are able to differentiate what is salient to moving the study along from what is background noise. Happenings in the research process are understood from the perspective of the effect on the study as a whole. Their actions are no longer informed by rules or maxims but by their past experiences. Benner (1984, p. 37) wrote: "If experts are made to attend to the particulars or to a formal model or rule, their performance actually deteriorates." Benner says that advancement to an expert level of performance takes at least 3 to 5 years of practice; however, mere experience does not guarantee that a researcher will advance through the stages. Progression requires the integration of experiences and attention to the nuances and shades of differences that appear as research practitioners conduct a number of studies. Not all researchers progress to the level of expert practitioner. Many, even those with extensive propositional knowledge and much experience, do not attain the expert level of practice mastery. Advancement to the level of expert researcher follows a developmental path through stages. Advancement from a stage occurs as the knowledge and skill a researcher has already accrued are not adequate to deal with studies of the next level of complexity. A higher level of skill is required to solve the problems presented at next level.

When students have mastered the basic competencies they know what tasks are engaged in to conduct a qualitative study, but they do not have the skills necessary to perform the tasks. This prompts the move to develop the skills necessary to perform the tasks prescribed in the textbooks. A course designed to develop the skills required to conduct a qualitative study (data generation, analysis, and communication of results) could be offered. The course might use

graduated practice exercises to increase students' level of performance. When students have attained a sufficient mastery of the skills, they are able to conduct a qualitative study at advanced beginner stage. In deciding what to do and when to do it, they are able to follow a plan laid out by a tradition or copy the steps used in a previous study. They remain dependent on external authorities to tell them what to do.

With more experience, students can move to the level of a competent qualitative research practitioner. The advancement to the level of competent performer can take place through closely supervised experiences, such as participating in a qualitative research practicum, conducting pilot studies, serving as an apprentice in a faculty member's study, and finally producing a qualitative dissertation. On reaching the level of a competent practitioner, students can understand that to accomplish their research goals, they need to make adjustments to prescribed steps and to make their own situated judgments about what processes should be carried out. They also are able to be flexible in application of these processes. When an opportunity or problem is encountered in a study, they are able to disengage from the flow of the study to think through how to respond.

Process beyond the competency level to the expert level usually occurs after graduating from a doctoral program. Movement to these more advanced levels occurs through the situated learning (Lave & Wenger, 1991) that happens in carrying out qualitative research projects of increasing intricacy and difficulty. Advancement is assisted by working with a mentor or supervisor and with participation in a local or web-based community of advanced qualitative research practitioners (Wenger, 1988; Wenger, McDermott, & Snyder, 2002).

This chapter has presented the expert competencies in qualitative research as the skills and knowledge needed by practitioners to conduct a qualitative study. The full achievement of the expert competencies is demonstrated by conducting complex and complicated studies in which what to do and when to do it is informed by the practitioners accumulated background understanding. Advancement to full expertise occurs through a series of steps from novice practicing through competent practicing to full expert practicing. Attaining full mastery of the expert competencies requires experiences beyond doctoral level training in psychology programs. However, doctoral programs can advance students toward the competency level of practice. Presently, most doctoral programs do not offer sufficient course work, qualitative research practica, or substantial support and supervision for qualitative dissertations to allow students to attain the level of competent qualitative researchers. In the past decades, many doctoral programs in psychology did not offer any courses in qualitative research. Their curriculum offered and required only courses related to quantitative-based research. If students were allowed to use a qualitative approach in their dissertations, they did so without sufficient understanding and necessary skills, and, often, without adequate supervision by experienced mentors. In recent years, many psychology doctoral programs seem to be more open to qualitative approaches. Ponterotto's survey of counseling psychology programs (reported in Azar, 2008) found that 95% of them allowed qualitative dissertations, although only 10% of the students produced them. Ramesh's (2005) study of eight elite APA accredited counseling programs found that all eight espoused methodological diversity in their web sites, program documents, and interviews with program directors. Nevertheless, only one of these programs required a course in qualitative research for graduation. The other programs allowed students to take a course in qualitative research, but the course was not required, nor could it be taken as a substitute for one of the five or six required courses in quantitative methods.

If psychology programs are to assist students in achieving a competent level of qualitative research practice, it will require a minimum of two semester courses, a qualitative research practicum and a well-supervised dissertation. The tasks of generating worthwhile qualitative data and their insightful synthesis require specialized knowledge and skills; data generation is not a simple extension of everyday conversations and observations; nor is qualitative analysis a matter of following a set of rules or entering data in a software package. Because qualitative research works in the medium of language rather than mathematics, much of what is mastered in quantitative courses is not applicable to qualitative research. In some ways, the attempt to transfer quantitative methods and values to qualitative research interferes with attaining competency in qualitative methods.

It is generally understood that studies with numerically based research require training in sophisticated skills before they can be undertaken. Ordinary and everyday understanding of mathematics is not sufficient to conduct a quantitative study. However, students sometimes try to conduct a qualitative study with only their everyday understanding of how to talk to people and how to make sense of what they read. Conducting a worthwhile qualitative research project also requires the mastery of sophisticated knowledge and skills. The following sections offer a brief overview of topics that could be addressed and resources that could be used to help students attain a competent level in the expert competencies.

16.3.2 Designing Qualitative Studies

A qualitative research project begins by defining its goal; for example, to find out the attributes and structures of the experience of being cared for. The design is first of all pragmatic. Given the time and resources available, the level of skills of the researcher and the access to appropriate sites and participants, decisions have to be made about how the goal could be achieved. The qualitative traditions have developed a set of tools that other researchers have found helpful in previous studies. However, these tools may not be useful for achieving the goal of a new study. Researchers are, then, expected to create new data gathering approaches that can work in for the particular study. For example, if the goal of a study is to understand the experience of relating as an avatar to other avatars in the Second Life computer simulation, face-to-face interviews are not available. Designing a qualitative study is not completed when the proposal is written. It remains flexible and changeable as problems and opportunities occur in the pursuit of the research goal.

Carrying out a research process because it was acceptable in another study or because that is the way a book said it should be done, demonstrates a novice level of skill in the design process of a study. Participants and sites should be selected because they are needed to accomplish the research goal. The number of participants interviewed should not be predetermined but decided on the basis of the research goal; for example, learning in great depth about the experience in one or two people or in learning about the variation in the experience over a larger number of participants. An originally selected participant may be found to not be articulate about the experience and, thus, someone else should be selected.

Qualitative researchers who function at the expert level need to "think on their feet," make adjustments in the midst of the study, change directions when what is being done is not advancing the study to its goal, and even change goals when a different opportunity arises while the study is underway. Movement through the levels of performance in the expert competencies

comes from practice and experience. As researchers move up through the levels of the practice competencies, they are able to make better decisions for moving the study along. Those functioning at the expert level are able to notice when changes are needed and to make the appropriate changes that move the study to its goal.

16.3.3 Data Generating Skills

The purpose of data generation in qualitative research is to produce fully elaborated examples of the experience being investigated from participants. The examples need to include descriptions of the historical and social context in which they occurred, the thoughts and feelings the participants had, and the relationship of the example to other events and happenings in the participants' lives. The generation of examples is primarily accomplished through interviews and observations.

Access to Sites and Participants. The first skill needed to generate data is ability to negotiate access to relevant participants and sites. Administrators of sites and individual participants are often leery of being open to researchers. Researchers need to be able to present what they want from the sites and participants in a way that respects their concerns and honors their time. They need to adapt their study designs to take account of the concerns of the sites and participants, yet allow them to meet the goals of their studies. There is no formula to be learned on how to negotiate access. What is done is situation–specific, although role play sometimes will help to improve the skill.

Interviewing. The most used skill in data gathering is interviewing. Even when generating data through observation, researchers engage in informal and formal interviews with participants. To generate a complete description of a participant's experience requires establishing a trusting relationship that allows the participant to feel free to explore all facets of an experience. Some participants are resistant to talking to strangers (including researchers) about their personal lives; some only share with the researcher the parts of their experience that present them in a good light; and others try to figure out what the researcher wants to hear and then limit what they say to what they think will please the researcher. Researchers need to have the skills to move beyond these resistances. Some of these skills are similar to those needed by clinicians in their work with clients which involves the building of rapport and a working alliance (Gelso & Hayes, 1998). The aim of the qualitative research interview, however, differs from therapeutic interviewing. The purpose of the qualitative interview is to gain examples of the investigated experience, not to serve the needs of the participant. The participant needs to buy into the worth of the time and effort they are giving to share their experiences.

The time spent with a participant is limited, so the researcher must make efficient use of the time available. Group interviews (focus groups) can generate more data in less time than one-to-one interviews. However, conducting focus groups requires its own set of specialized skills (Barbour & Kitzinger, 1999; Morgan, 1997). To make effective use of the limited time available for one-to-one interviews requires preparation by the researcher. Researchers need to develop main questions and possible follow-up questions in advance. For part of their preparation, they may engage in mock interviewers with associates. The course of the actual interview may move in unanticipated directions and the researcher needs the skill to explore the new direction or to move the interview back to areas of importance for project. Researchers have to notice when a

salient area is approached and have to be able to follow up and probe further in this area. A number of qualitative interviewing texts are available which describe these interviewing processes and skills (Kvale, 1996; Mishler, 1986; Rubin & Rubin, 2005; Seidman, 2006; Weiss, 1994). However, reading about conducting a qualitative interview to generate descriptions rich in detail, with vividness, and containing nuanced differentiations is only a supplement to practicing interviewing. Students can be given graduated interview assignments to be recorded and transcribed. In reviewing the transcripts, attention is directed at what the student said rather than the interviewee's responses. From these assignments students can reflect on and discuss what they said and did; for example, when what they said closed off the interviewee, what they could have said to have enabled the interview to move forward, and what they did say that produced valuable descriptive statements.

Gaining interviewing skill also involves an increased sensitivity to the ethical nature of the interview. The ethical dimension in interviewing involves more than enacting the research codes: for example, maintaining confidentiality, not engaging in deception, and honoring the right of participants not to continue. Participants open their lives to another person during an interview and need to be treated with respect and courtesy. The interviewer is in a power position to the interviewee. When an interviewee is not performing to the expectations and needs of the interviewee, unless there is genuine care for the interviewee, interviewer comments, gestures, and facial expressions can communicate disappointment in the interviewee. The rewards for producing a successful interview favor the interviewer in terms of grades, graduation, publication, and perhaps promotion. The interviewees receive only appreciation for their time and effort and perhaps a gift or small payment. A researcher who begins a study without appropriate preparation and adequate development of skills, simply to complete a class assignment, takes from participants their time and effort and gives little or nothing in return.

Observation. Patton (1980) opens his early chapter on observation with the story about a man with a gun chasing another man rushing through a meeting of researchers. When the researchers were asked to write a report of what they observed, most were more than 40% mistaken. Although the story was meant to show that observational data cannot be trusted, Patton wrote that what the story really demonstrates is that one cannot trust observations by untrained and unprepared observers. Patton ends the discussion of the story by writing:

► First, the popular wisdom about observation being nothing more than selective perception is true in the ordinary course of participating in day-to-day events. Second, the skilled observer is able to improve the accuracy, validity, and reliability of observations through disciplined training and rigorous preparation. (p. 72)

Preparation includes becoming clear about of all that can be observed at a site, what is important to attend to in order to provide worthy data for the study. What is significant for a study is not obvious at first glance. Keeping track of what is seen over a period of time requires the development of skills for taking orderly notes. Observational data generating also includes decisions about how an observer relates to the site. Do they assume the role as an ordinary member of the site and engage in its activities along with the other members? Do they place themselves outside the membership as an onlooker? A number of books on participant observation point out the issues to consider in making these decisions (e.g., Jorgensen, 1989).

16.3.4 Analysis-Synthesis Skills

The findings of qualitative research are derived from a meticulous examination of the gathered data. Noticing an underlying pattern or theme is not a mechanical process, but is largely dependent on the cognitive capacities and skills of the researcher. Just as not all students are able to skillfully perform in the numeric area, perhaps not all students are capable of the level of cognitive skill to conduct a qualitative analysis with its need to make fine textual distinctions and uncover underlying patterns. The analytic-synthetic skills are the most difficult to teach. Practice on short stories, poems, and other literature can increase skill in analysis of languaged data.

Techniques have been developed to assist the creative work of producing a synthesis that calls attention to aspects and relationships in an examined experience; for example, coding the text. The first step is open coding in which the text is broken apart into units and each unit is identified as an instance of a concept. Next is axial coding in which the identified concepts produced in the open coding are gathered around a higher-order concept (an axle) as attributes of the higher-order concept. The next step is to gather the axial concepts together in an overall concept that represents the general thrust of the data (Holton, 2007). Some researchers do not break the text apart before the synthesizing work, but work with the whole text. As researchers gain experience and read more studies, they accumulate a repertoire of conceptual schemes that they can try on the data.

An important part of the analysis-synthesis process is testing the proposed schemes as to how well they fit the data. This follows the logic of the hypothetical model of quantitative research. Except that it is an ongoing process in which the data that did not fit the proposed scheme are used to alter the scheme in the direction of a more comprehensive fit. The process continues until a scheme is tweaked to the point that it accounts for most all of the data. The testing depends on the integrity of the researcher to not force data, which does not fit, into a proposed scheme.

Analysis requires considerable preparation before it is carried out. Researchers need to be acquainted with the theories and research that appear in the literature on the topic and the organizing schemes and models offered in the literature. One of the reasons for conducting a qualitative study is dissatisfaction with the models proposed in the literature. Qualitative research generates data containing full descriptions of an experience in order to derive a more useful descriptive model of an experience. This requires researchers to develop the capacity to not only know what others have said about the topic, but to also be able to come innocently to the data without preconceived notions of what they will find. It involves the ability to start from the beginning and take a fresh look at the data. There are texts available that address the process of qualitative analysis (e.g., Boyatzis, 1998; Coffey & Atkinson, 1996; Dey, 1993; Potter, 1996; Wolcott, 1994).

Qualitative researchers at the competent level need to be practiced in the use of at least one of the qualitative software packages. The packages are very helpful in working with the mass of data generated in a study; however, mastering all the ways in which they can assist in conducting an analysis takes time and practice. A student should be already skilled in the use of a qualitative software package before beginning a dissertation.

16.3.5 Communicating Results

The write-up or report of a qualitative study is framed for the readers of the report (Wolcott, 2001). Because implementing the sequence of steps from traditional qualitative method does

not necessarily produce worthy or believable results, a qualitative report has to lay out what was done and why. The report has to take the reader along on the journey traveled by the researcher. The reader should be told about what decisions were made and why. The write-up should provide the reader with a transparent view of the research process. The researcher should approach the write-up as if the reader needs to be convinced of the results.

The form of the write-up is an argument intended to show the reader how the results are derived from the data and that the data are trustworthy and sufficient to support the results. Because the evidence for the results is the collected data, the researcher needs a careful and detail descriptions of how the data were generated, and how efforts were made to locate data that would correct or elaborate the initial interpretations. Excerpts from the data that were significant for the development of the results can be quoted and their importance explained. The trial and error process engaged in establishing a structure which fits the data should be part of the write-up. Readers are not expected to accept results simply because the researcher carried out a study.

There is no prescribed format for reporting qualitative results at the current time. Writing a report that anticipates and answers readers could have as they go through the texts and that presents the argument in a logical and supported way is a skill that qualitative researchers are required to develop. Associates and supervisors, as well as prospective readers, can provide feedback on drafts. As with any writing skill, report writing improves with experience and feedback. A researcher at the competent level should be able to write a well argued report with supporting evidence and with detailed explanations of the processes used in the study.

Qualitative research does not follow the logic assumed by the APA journal format. In some doctoral programs, qualitative dissertations are expected to be written using chapters that follow the APA format. Because many journals expect that researchers (both quantitative and qualitative studies) use this format, qualitative write-ups are often without sufficient detail and appear to the reader as thin and unconvincing. With the advent of web journals, it may be possible for researchers to publish reports of adequate length to include the details of a study's process and to present arguments that clarify how the results were derived from the data. Perhaps the highest level of skill in report writing is to present a transparent description of what was done and why and a convincing argument for the results within a journal length article that uses the standard APA format.

16.4　Summary

It may be that the first doctoral dissertation in the United States using what would be referred to today as a qualitative method was produced by Adrian van Kaam in 1958 at Case Western Reserve University (portions reprinted in 1969, pp. 305–340). His study was about the experience of "really feeling understood," a notion taken from Roger's theory of therapy. Van Kaam wrote about the use of his results:

▶ Regarding the application, the results of phenomenal [qualitative] psychology seem to be of greater use in reaching the deeper layers of common human existence which is the concern of the present study. To the extent that phenomenal psychology is also and primarily interested in the explication of an experience in its individual givenness, its results are useful in problems of therapy and counseling, interpretation of personality tests, development of personality, creativity, and

human relationships....It is apparent, then, that the results of both kinds of psychology [traditional academic psychology and qualitative psychology] do not exclude but complement each other. (van Kaam, 1969, p. 340).

Qualitative psychology is an alternate form of research designed to study the experiences of persons. It is based on the premise that the organization of the human experiential realm more closely resembles natural language than mathematics. Its results are in linguistic form as are its processes of data gathering, analysis, and communication of findings. Understanding qualitative studies requires knowledge of the logic and rationales that underlay their processes and the cognitive operations. Mastery of the basic competencies will enable students to make sense of the studies. However, the capability to conduct a qualitative study requires mastery beyond the basic competencies. These additional competencies are the special skills used for language-based research. Mastery of them is gained through practice and experience and can proceed from a beginning, novice level of performance to an expert level.

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17 Epidemiology

David L. Streiner · John Cairney

Abstract: Epidemiology is the study of the distribution and determinants of health-related conditions in the population. As such, it is concerned with issues such as the total number of cases of a specific disorder in the population (prevalence) and the number of new cases that arise within a given time frame (incidence). These data are most often derived from cross-sectional surveys, which have become increasingly sophisticated over four "generations" of epidemiological research, and now consist of nation-wide studies involving interviews with thousands of randomly-selected individuals. In addition to counting individual cases, epidemiology is concerned with quantifying the degree to which certain factors may predispose people toward certain disorders, while others may be protective. These effects are captured with statistics such as the relative risk and the odds ratio. There are specific research designs that are used to gather these data, including case-control and cohort studies. In designing and evaluating such studies, it is important to be aware of a variety of biases that can distort the results. These include the fact that those who volunteer to be in a study are different in systematic ways from those who do not enter studies; that those who are more chronic are likely to be over-sampled compared to people who remit quickly; and that people drawn from certain settings, such as the workplace, are not representative of the population in general. Finally, epidemiology attempts to quantify the risk of adverse outcomes associated with disorders, such as the risk of premature death.

17.1　Overview

When one of the authors gave a copy of his book *PDQ Epidemiology* (Streiner & Norman, 1996) to his mother, she said, "That's nice, dear, but what do you know about skin diseases?" The answer is "Nothing," but fortunately, despite this common misperception, epidemiology is not the study of the epidermis.[1] Rather, the term comes from the Greek: *epi*, meaning "among," and *demos*, meaning "people." Terms that are related to epidemiology are *epidemic* (the outbreak of a disease in a localized group of people) and *demography* (the study of vital and social conditions of a group). These other terms begin to tell us what epidemiology is about – the study of the distribution and determinants of health-related conditions in the population.

　　Epidemiology has a long tradition, dating back to the middle of the seventeenth century, when John Graunt, who was a haberdasher, published the *Natural and Political Observations Made upon the Bills of Mortality* (Graunt, 1662/1939). Graunt gathered "Bills of Mortality"

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[1] The confabulation of epidemiology with epidermis is not isolated; the other author (JC) was once asked about his vocation by an overly inquisitive cab driver. When the driver was told "psychiatric epidemiologist," he replied, after a pause, "… so, the study of the effect of mental problems on skin disease?" At the present time, the field of psychiatric dermatology is still in its infancy.

(which we would now call death records) from parishes in and around London in order to determine factors that affected when and why people died. He discovered that more boys were born than girls; that while male deaths exceeded female ones, men had less morbidity while they were alive than women; that one third of children died before the age of 5; that the number of deaths increased in the autumn; and that various diseases followed different temporal trajectories: death rates from rickets and "a stopping of the stomach" increased over time, while gout stayed the same, and "the stones" tended to decrease over the years. These findings do not appear surprising today (although some of the diseases may), but in one way they were revolutionary: for the first time, data about individuals were combined in order to draw broad conclusions, and general laws could be deduced from the patterns of death.

About 2 centuries later, there was an outbreak of cholera in London. At that time, drinking water was delivered by private companies, which drew it from the Thames River. John Snow, a local physician, drew a map of the city, showing where each person had resided before dying of the disease. The deaths were clustered in an area supplied by the Southwark and Vauxhall Company. However, there was a reduction in cholera deaths from drinking water supplied by the Lambeth Company after the company had relocated its pipes to a less polluted section of the river. He confirmed his hypothesis that drinking water was the culprit by famously removing the handle of the Broad Street pump (which still stands in central London) and noting a drop in the death rate (Snow, 1855/1936).

Around the same time, mental health epidemiology was taking its first, faltering steps. European psychiatry of that era was dominated by a biological perspective, spurred by the discoveries that "general paresis of the insane" (tertiary syphilis) was caused by a spirochete and "pellagra psychosis" by a deficiency of nicotinic acid in the diet, leading to the hope that a physical cause could be found for all mental disorders. However, in the United States, the dominant perspective was a psychosocial paradigm, looking at society and the family as the source of the pathology (Klerman, 1990). As Grob (1985) has pointed out, nearly all of the psychiatrists in the United States in the nineteenth century were both hospital superintendents and Protestants, who believed that gathering data would uncover the laws underlying disease, including mental illness, and that inductive science would validate their religious beliefs. One of the most prominent of the superintendents was Edward Jarvis, who found that the further people lived from psychiatric hospitals, the less they used them. This led him to argue against large, centralized hospitals, and in favor of small, geographically distributed ones (Jarvis, 1850). In 1854, Massachusetts established a Commission of Lunacy, which was headed by Jarvis, to determine the number of mentally ill patients in hospitals. His report (Jarvis, 1855/1971) pointed to the role of stress and social factors such as poverty, rapid social change, and urban anomie as key elements. To a large degree, the report was limited by the absence of a reliable diagnostic schema, a problem that would persist until the mid-1960s. Further, despite its length (over 200 pages), he did not use its census-like statistics in an epidemiological manner, and many of his conclusions were independent of the data (Grob). For example, the religious beliefs of Jarvis (and nearly all other superintendents of the time) led them to extol the virtues of farm and small-town life, and to view the growth of large cities with some degree of alarm. Thus, the Commission on Lunacy was convinced that increasing urbanization would result in a rising incidence of insanity, a conclusion reached in the report despite their own data which showed no such trend. Interestingly, the advances in mental health epidemiology between the 1850s and the 1920s came not from psychiatry, but from the social sciences. The

census of 1840 tried, unsuccessfully, to count the insane for the first time. However, it was severely compromised by the racial bias of the enumerators, who overstated the number of "insane" and "idiotic" free Blacks in the Northern states; even towns that were all White and psychiatric hospitals that did not admit Blacks were reported to have high numbers of them (Maultsby, 1982). Over the next 30 years, Jarvis worked with the superintendent of the census, Francis Walker, to improve data collection. The tenth census, in 1880, resulted in 25 volumes of findings, including one by Frederick H. Wines on "dependency," a term that included the mentally ill, the retarded, and criminals (U.S. Bureau of the Census, 1888). In keeping with the established beliefs of the time, the increase in "dependency" was related to organized society. There were special censuses in 1904 and 1910 that focused on the mentally ill but, as with the previous enumerations, they were severely hampered by the lack of a reliable and valid nosological framework.

From the turn of the century until the end of World War II, psychiatric epidemiology continued to be dominated by social scientists (Grob, 1985). Psychiatry itself was divided into two opposing camps, which still exist in various guises. The American Medico-Psychological Association (the forerunner of the American Psychiatric Association) tried to devise a uniform system of diagnostic categories that would be used in all hospitals. However, Adolph Meyer, who can be considered one of the founders of American psychiatry, and the chair at Johns Hopkins, resisted "one-word diagnoses" and the attempt of statistics to solve psychiatric and social problems. Ironically, the last resident he trained was Alexander Leighton, who is arguably one of the leading figures in the development of modern psychiatric epidemiology.

According to Klerman (1990) and Weissman (1995), the second generation of mental health epidemiology entered its "golden age," in the era after World War II, with the notable examples of the Midtown Manhattan Study (Srole, Langner, Michael, Opler, Rennie, & Leighton, 1962) in New York and the Stirling County study in Eastern Canada (Leighton, 1959). These studies featured large, representative samples of the general population, high response rates, and measures of overall impairment, rather than the unreliable, psychoanalytically based diagnoses of *DSM-I* (American Psychiatric Association, 1952). Again, the studies highlighted the causal role of social factors in the genesis of mental disorders, reflecting what Srole and Fischer (1980) called the "Mental Paradise Lost" doctrine: that "mental health in the population at large has long been deteriorating, and at an accelerating tempo during the modern era" because of urbanization (p. 209).

The third generation of research, such as the Epidemiologic Catchment Area (ECA) study (Regier et al., 1984), was marked by large, community-based samples; the use of structured interviews administered by lay interviewers; and the more reliable diagnoses found in the Research Diagnostic Criteria (Spitzer, Endicott, & Robins, 1978) or later editions of *DSM*. The fourth generation, in which we are now, has built on the methodological advances of the previous generation. However, rather than sampling from a limited number of communities (the ECA, for example, was conducted in five cities in the United States), representative samples were drawn from the entire country, using sophisticated, multistage sampling techniques to ensure representativeness. Exemplars of this generation are the National Comborbidity Survey in the United States (Kessler, 1994) and the Canadian Community Health Survey, Cycle 1.2 (CCHS; Gravel & Béland, 2005). Weissman (1995) believes that the fifth generation of mental health epidemiology will focus on one group generally excluded in the previous

generations: children.[2] There were a number of valid reasons for this omission, including legal (e.g., varying definitions from one jurisdiction to another regarding the age at which a child could consent to be in a research study), nosological (definitions of diagnostic criteria for childhood disorders are still somewhat in a state of flux), and methodological (the paucity of well-standardized, age-appropriate structured interviews). Now that many of these problems have been resolved, we are starting to see epidemiological studies of children, but none in North America that meet the criteria for fourth generational studies in adults.

In order to be able to understand the results of epidemiological studies, it is necessary to learn some terminology of epidemiology. In the next section, we will introduce some of the basic concepts and, following that, some other terms that will allow you to sound more like a maven.

17.2 Basic Competencies

17.2.1 Research Designs Used in Epidemiology

Cross-sectional surveys. The studies we have described so far are *surveys*, in which information about the disorder, and possible contributing and protective factors, is gathered at the same time. If this is done just once, as with the CCHS 1.2 (Gravel & Béland, 2005), it is called a *cross-sectional survey*, because it looks at the population at one slice in time. In light of the amount of data that is gathered, it is a relatively inexpensive type of study (although the emphasis is on the term "relatively"). The major drawback is that, because information about the outcome (diagnosis) and putative causes is gathered simultaneously, it is impossible to definitively establish causation. People are notoriously inaccurate regarding when symptoms first began, or when other events occurred (Streiner & Norman, 2008). This is particularly true in psychiatric epidemiology, where the onset of a disorder is often very slow and insidious, so that it is difficult to say when it actually began. For example, early theories about the etiology of autism implicated "refrigerator" mothers, who were emotionally frigid (e.g., Bettelheim, 1967; Kanner, 1943, 1949). Later studies showed a strong genetic basis for autism (Folstein & Rutter, 1977), implying that the coldness may be a reaction to having an emotionally nonresponsive child, not the cause. This illustrates the difficulty in being able to say with any assurance that cause X preceded disorder Y based on data gathered at one time point.

Longitudinal surveys. The logical solution is a *longitudinal survey*, in which the same people are interviewed a number of years later, as was done in both the Stirling County (Leighton, 1959) and the Midtown Manhattan (Srole et al., 1962) studies. Its advantage is the ability to disentangle cause and effect for some outcomes, but at the expense of an increase in cost, and the loss of participants over time, due to deaths, moves, refusals, and so forth. For example, in the National Longitudinal Study of Children and Youth, based in Canada (Willms, 2002), only about 62% of respondents were available for follow-up 10 years later at wave 6. Not only does this affect the sample size (and hence the power) at later times, but it also raises the specter of differential attrition: that those who drop out are different in some systematic way from those who do not, possibly biasing the results. Another problem with longitudinal surveys, especially those that span many decades, is that the field may change quite fundamentally within that

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[2] We use the term "generally" because although it is true in the main, that children have not been the focus of most community studies of mental disorder, notably exceptions to exist (see Boyle et al., 1987).

time period, so that constructs, such as personality or depression, and the ways in which we measure them, may change, making it problematic to reconcile "old" forms of assessment with "new" ways of thinking. Early surveys on the development of children of the great depression offer one such example (see for example, Clausen, 1993). The strength of some of these surveys was that they followed the same group of children from childhood, through adolescence, into adulthood, spanning several decades. One of the central constructs, however, was personality, which was assessed at baseline using the Rorschach. It is extremely difficult to use these data to understand personality development from childhood to adulthood given the dubious validity, not to mention reliability, of the ink blot test.

Ecological surveys. In some situations, we do not have data at the individual person level, and must rely on aggregated data, gathered from entire regions. This type of design, called an *ecological survey*, is widely used in fields such as oncology and cardiology, linking countries with a high dietary fat intake to a high incidence of disorders such as breast cancer and coronary artery disease. An example in the mental health field is a series of studies by Sakinofsky (Sakinofsky & Roberts, 1987). In one example, for instance, it was found that Canadian provinces with high suicide rates also had high rates of alcohol sales and deaths from cirrhosis of the liver or other alcohol-related liver diseases, pointing to a link between suicide and alcoholism. The major advantage of ecological surveys is that they are very inexpensive and can be done quickly, because they rely on data that are usually readily available through public records. But, there are also a number of problems. First, while we may know how many people in each region were exposed to the risk factor (in this case, alcohol) and how many had the outcome (suicides), we do not know how many exposed individuals had the outcome. That is, it may not be the drinkers who are committing suicide; alcohol consumption may be a marker for some other variable, such as poverty, that is the causative agent, so that some people may drink, but it is different people in the same region who take their lives. This is known as the *ecological fallacy*. The second problem is that even if the correlation is between the correct variables, such *ecological correlations* are usually higher – and often much higher – than the correlation that would be found on an individual person level.

Surveys are used most often when we are interested in a broad range of outcomes, such as counting the number of people with various psychiatric diagnoses. There are times, though, when we want to focus on a specific outcome, such as depression, suicidal ideation, or adaptation following a significant loss. Because these conditions are relatively rare, it is more efficient to specifically sample these cases, rather than to survey the general population. For example, we may want to determine if people who have made a life-threatening suicidal attempt are more likely to have suffered the loss of a parent early in life than have people who have not attempted suicide (e.g., Adam, Lohrenz, Harper, & Streiner, 1982). To simplify matters, let us assume we will classify people into two groups: those who have attempted suicide and those who have not. Similarly, we will dichotomize loss into present (one or both parents died before the person was 15) or absent. This will result in a 2 × 2 table: suicidal with early loss, suicidal without loss, non-suicidal with loss, and non-suicidal without loss, and we will count the number of people in our sample who fall into each of the four cells.

Case-control studies. There are two ways we can go about doing our study. One way is called a *case-control* study. We begin by finding people who have a history of suicidal attempts (cases) and a group of people who do not (controls), and determine how many in each group suffered parental loss. This is not a particularly powerful design for determining causality, but may be the only possibility when the prevalence of an outcome is extremely small. The major challenge in this design lies in choosing the correct control, or comparison, group. Cases and controls

must be matched for other variables that may affect the outcome, such as age or gender. If the groups differ with respect to these factors, then group differences may be due to them rather than to parental loss. For example, we know that women attempt suicide more often than men (although men actually commit suicide at a higher rate; Gibbs, Beautrais, & Fergusson, 2005). If for some reason more men experienced early loss than women, then this could lead to the paradoxical result that those with loss attempt suicide less often. Variables that are related to both the outcome and the grouping variable are called *confounders*, and interfere with our ability to establish causality.

On the other hand, we do not want to match on other variables that may be related to the causal factor. For example, we may be tempted to match the groups on the basis of depression, because this is associated with suicidal risk. However, because parental loss may result in depression, making the groups equivalent on the basis of this variable may conceivably wipe out real group differences in terms of the outcome; this is an example of *over-matching*. In these two examples, depression differs from age or gender in that it is part of a possible *causal chain*, leading from loss to depression to suicidal attempt; whereas age and gender are not part of the chain. Determining whether a variable should be controlled for (matched) or not is not an easy decision; it must be made on the basis of theory or your knowledge of the field. One major problem with case-control studies is that the groups may differ with respect to other confounding variables that we are not aware of.

Cohort studies. The second way of conducting the study is called a *cohort* design. Instead of finding cases and controls, and looking backwards in time to see how many had or did not have the probable cause, we sample people on the basis of the putative cause and follow them forward in time. In this study, we would locate one group (or cohort) of people who had lost a parent by the age of 15 and a second group of people who had not lost a parent, and then look at the proportion of each group who had attempted suicide by the age of, say, 50. However, to say that we "follow" them does not necessarily mean that we have to sit around and wait for 35 years (although some studies, such as of the survivors of Hiroshima or the offspring of schizophrenic parents, involve just that). If suitable records exist, we can locate in the present people who have lost a parent 35 years ago, and use other records or self-report to determine how many have made serious suicide attempts. Cohort studies are often superior to case-control ones, because they do away with the need to recall events, and all the biases that accompany it. By the same token, though, cohort studies also require careful consideration of the variables that should be used to match the two cohorts; and are susceptible to biases due to the fact that the groups may differ on variables we cannot control for.

17.2.2 Biases Affecting Studies

All of the designs mentioned previously are susceptible to various biases that affect who gets into a study and, consequently, what conclusions are drawn from it. What follows is far from a comprehensive enumeration of all possible biases. Sackett (1979) lists 35 of them, and with little imagination, many more can be proposed. The biases mentioned here are the major ones that affect the types of studies most often used in epidemiological research.

Volunteer bias. Ideally, surveys, case-control studies, and cohort studies would enroll a random selection of people drawn from the populations of interest. However, ethical considerations require that people consent to being in a study, and not all do. The question, then, is whether

those who do volunteer are representative of the larger group, or if they differ in some ways that may affect the outcome. The literature is not promising; volunteers are different from refusers. In the National Diet-Heart Study (American Heart Association, 1980), volunteers were more likely than nonvolunteers to be nonsmokers, more concerned about health matters, more highly educated, employed in skilled and professional jobs, Protestant or Jewish rather than Catholic, living in a household with children, and active in community affairs.

Healthy worker bias. Many studies sample people from the workforce for obvious reasons. They are easier to find and recruit than people in general; we know where to find them, companies maintain computerized lists of employees, and mass mailings can be sent out through internal e-mailings. However, those who are working are not representative of the population as a whole; by definition, they are healthier. The entire adult population consists of those who are working and those who are unable to work because of disabilities and other health-related problems. Consequently, as a group, the health of the general population must be worse. The problem is exacerbated when the workers must pass a physical examination, such as those in the military, police officers, fire fighters, or garbage collectors. Seltzer and Jablon (1974), for example, found a lower mortality rate among those discharged from the Army than among people of similar age and gender in the population at large, even 23 years after discharge. (This may also be due to the fact that if one can survive a steady diet of Army food, one can survive anything.)

Incidence–prevalence (Neyman) bias. When we do a cross-sectional survey, two groups of people will be systematically under-represented: those who die from the disorder and those in whom the condition resolves quickly. For example, a survey to measure the prevalence of suicidal ideation in the general population will naturally miss all those who successfully acted on their thoughts. Similarly, a survey looking at point prevalence will disproportionately sample those whose conditions are more chronic. This is seen in ❯ Fig. 17.1, which shows the duration of illness for ten patients. Although the length of illness is long for only four of them (B, D, E, and H), at any of the three survey times, anywhere from 50% to 80% of those captured will be

▣ **Fig. 17.1**
Illustration of the incidence–prevalence bias
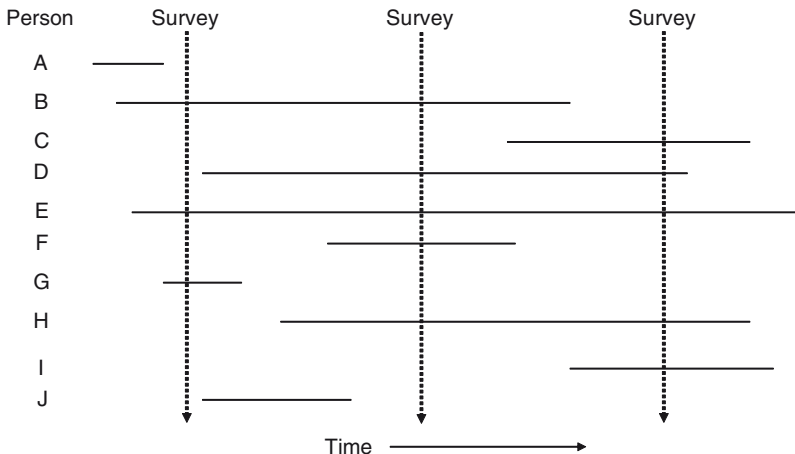
more chronic cases. For many years, the prognosis for schizophrenia seemed extremely pessimistic, because the studies did not include those for whom only a short hospitalization was necessary. Similarly, a cross-sectional survey of women receiving Aid for Families with Dependent Children (AFDC) found that 93% had been on welfare for 3 or more years, and 65% had been getting it for more than 7 years, reinforcing the beliefs of some that AFDC leads to chronic dependency. However, when women were followed longitudinally from the time they first applied for AFDC (thus avoiding the incidence–prevalence bias), the numbers dropped to 70% for 3 or more years, and only 30% who received it for more than 7 years (Duncan, Hill, & Hoffman, 1988).

17.2.3 What Is a Case?

We have been using the term "case," and much of epidemiology involves the counting of them (i.e., people who have one or more designated conditions) over time or, as in Snow's study of cholera, over a geographic area. But, who is considered to be a case? For some disorders, the definition is fairly straightforward – a person who clearly meets all of the criteria. Even in medicine, though, the number of conditions that can be clearly and unambiguously defined is relatively small. Especially in the general population, most disorders exist along a continuum. Cancer, for example, is not a present/absent phenomenon; a person may have cellular abnormalities and growths (dysplasias) that may or may not progress to become cancerous. It is a definitional issue to decide when the dysplasias become large enough to be considered a cancer. This is even more true for psychological disturbances, in which it is more accurate to ask, "How depressed is this person," rather than, "Is the person depressed or not?" In psychiatry, "caseness" is usually defined as meeting some set of criteria. In the United States, these criteria are spelled out in the *Diagnostic and Statistical Manual*, the latest version of which is *DSM-IV-TR* (American Psychiatric Association, 2000); while psychiatrists in Europe use the tenth version of the *International Classification of Diseases and Related Health Problems* (ICD-10; World Health Organization, 1992); some countries, such as Canada, confusingly, use both systems.

Bear in mind, though, that many aspects of the definitions found in *DSM* and *ICD* are arbitrary. For example, to meet the *DSM* criteria for generalized anxiety disorder (GAD), the person has to have at least three of six criteria (e.g., easy fatigueability, irritability) for at least 6 months. But why 6 months as opposed to, say, 3 or 12 months; and why three symptoms instead of two or four? We can also argue that a person who meets all six criteria has more GAD, or a more severe type of GAD, than one who meets only three of them. Taking a disorder that exists on a continuum and dichotomizing it can result in two types of errors: false positives (those who meet the criteria, but may not suffer from a clinical disorder) and false negatives (those who suffer from GAD, but do not meet all of the criteria).

17.2.4 Finding Cases

Accepting these problems in defining a case, the next problem is finding them. Perhaps, the easiest way is to use registries of in- and out-patients in general and psychiatric hospitals. In fact, this was the method used in the earliest surveys, such as those by Jarvis (1855/1971) in the United States and Koller (1895) in Switzerland. However, there are many problems with this approach. First, receiving services is highly dependent on their availability. For example,

Joanette, Lawson, Eastabrook, and Krupa (2005) found that the probability of hospitalization for schizophrenic patients was directly related to the availability of beds, and fewer than half of those with a major depressive disorder receive any form of help (Parikh, Lesage, Kennedy, & Goering, 1999). In the United States, a large proportion of people do not have health-care insurance, and even for those who do, many insurance plans have only limited coverage for psychiatric disorders. The result of these, and other factors, is that registries will not capture a significant number of people with mental health problems. The other side of the coin is that many who do see a mental health professional do not have a diagnosable disorder, at least not one of the major disorders typically measured in epidemiological surveys (Lin, Goering, Lesage, & Streiner, 1997).

If the determinants of contact with the mental health-care system were randomly distributed in the population, then the result would "only" be an undercounting of the number of cases. However, they are far from random. Who seeks help; who is admitted as opposed to being seen on an out-patient basis; and who actually gets to see a therapist is dependent on a host of demographic and social factors, such as gender, socioeconomic status (SES), marital status, rural versus urban residency, age, willingness to admit to psychological problems, and so forth. Consequently, samples drawn from patient lists would be extremely biased with respect to the general population.

The case-finding procedure used in almost all studies since the 1950s involves random samples drawn from the population at large. The original surveys, such as the Midtown Manhattan and the Stirling County studies mentioned previously, used mental health professionals, such as psychiatrists and clinical psychologists, to conduct face-to-face interviews with those selected to be participants. This was required because the relatively objective and reliable criteria used in the latest versions of *DSM* and *ICD* did not exist then, necessitating reliance on expert opinion to make a diagnosis. Paying professionals to conduct interviews, though, is an extremely expensive proposition, so later surveys have relied on structured interviews such as the Diagnostic Interview Schedule (DIS; Robins, Helzer, Croughan, & Ratcliff, 1981) and the Composite International Diagnostic Interview (CIDI; Robins et al., 1988) administered by trained lay interviewers, either in person or over the telephone.

Structured interviews consist of a series of questions that are read to the participant. In most diagnostic schedules, various modules assess different disorders. In order to save time and reduce the burden on the respondent, there are often two or three screening questions (probes) in each module. If the person answers negatively to them regarding the presence or severity of symptoms, then that module is skipped; otherwise, the entire module is administered. The structured format is used to increase the inter-rater reliability of the questionnaire, and this indeed seems to work (e.g., Andrews & Peters, 1998). However, some people have argued that their inflexibility, combined with the lack of clinical experience of the interviewers, results in the under-diagnosis of some disorders (e.g., Brugha et al., 1999). In the case of the DIS and the CIDI, substantial differences were obtained when Kessler and his colleagues changed the format for asking probes for the diagnostic modules. In the DIS, respondents were asked "entry" or "probe" questions serially for each disorder. Depending on the response, Yes or No, a series of follow-up questions were asked, related to the disorder being assessed (e.g., depression). Once the module was complete, the interviewer moved on to the next disorder module. It is easy to imagine that subjects might become "test-wise" and learn to say No instead of Yes in order to end the interview more quickly; the consequence of this are much lower prevalences of disorders, especially comorbid ones. Kessler et al. reasoned that if all the entry questions for the disorder modules were asked first, this would reduce the likelihood of this

kind of response bias (interviews could then go back and ask follow-up questions for each module as before, based on the initial affirmative responses). The result of this modification, among other things, was to produce a lifetime prevalence of any disorder in the first NCS study close to 50%, a figure more than double that of earlier work which used the old format (Kessler et al., 1994). However, while it is tempting to conclude that the modification to the presentation of questions resulted in a more "accurate" estimate of prevalence, other concerns (over-inclusiveness of diagnostic criteria, high sensitivity, and low specificity) remain a problem with these kind of structured interviews. In short, minimizing response bias does not address more fundamental problems with validity – can half of the population really have suffered from a clinically significant mental disorder at some point during their lifetimes?

17.2.5 Counting Cases: Incidence and Prevalence

Now that we have defined and found cases, we can move on to the meat of epidemiology, which is counting cases. Depending on the type of information we want, we can count either *incident cases* or *prevalent cases*.

- *Prevalence* refers to the number of people who have the condition at any given time.
- *Incidence* refers to the number of new cases within a given time frame.

In order to set the scene, imagine that we want to determine the number of cases of a disorder first described by Norman and Streiner (2003), but which, for some unexplainable reason, has not yet made its appearance in *DSM*: photonumerophobia, or the fear that one's fear of numbers will come to light. We randomly sample people in a small community of 100 individuals, determining whether people meet the criteria for this dread disorder currently or at any time in the past and, if the latter, when the disorder began and ended. ⊙ Figure 17.2 shows the time of onset and, for some people, remission of this disorder for the 12 people who are or were cases. Only persons D and G developed the disorder during the sampling window, and would be deemed to be incident cases. Thus, the incidence of photonumerophobia is:

$$Incidence = \frac{Number\ of\ New\ Cases}{Number\ at\ Risk} = \frac{2}{100} = 0.02.$$

On the other hand, A, B, D, F, G, I, K, and L have the disorder during this period and would be prevalent cases. Note that all of the incident cases are also prevalent ones, but not vice versa. The prevalence is therefore:

$$Prevalence = \frac{Total\ Number\ of\ Cases}{Number\ at\ Risk} = \frac{8}{100} = 0.08.$$

⊙ Figure 17.2 raises two questions: How wide should the window be? And should person G be considered an incident case, because she had the disorder previously, which went into remission before the survey was done? The answers are, "It all depends," and "It all depends." Part of the ambiguity stems from the fact that the methods and terminology of epidemiology come from the study of infectious diseases, and predate the time that most of them were treatable. For the most part, the onset of these was relatively rapid and easily identifiable; and once a person contracted the disorder, he or she either died (e.g., cholera), developed an immunity against further

⬛ **Fig. 17.2**
Onset and duration of photonumerophobia among 12 people
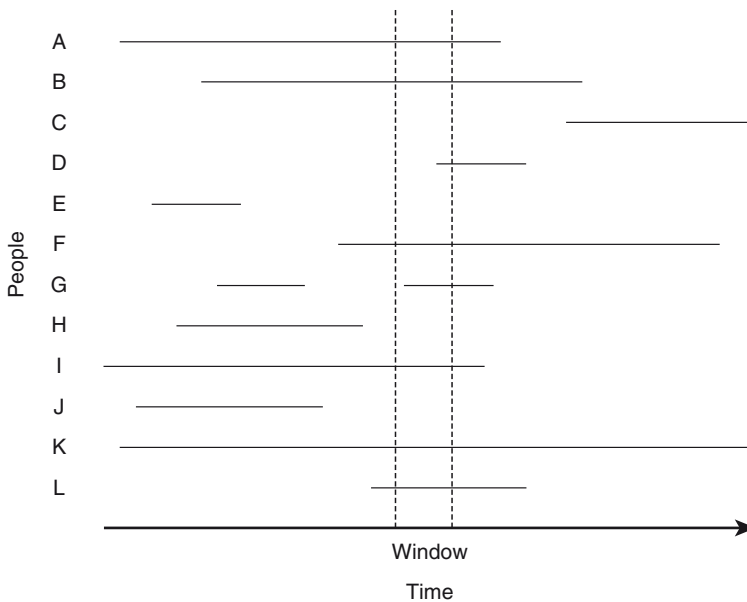
infections (smallpox or measles), or had it forever (tuberculosis). Thus, it made sense to keep the window fairly narrow and to not worry about people who had had the disorder previously.

Most psychological disorders, though, do not adhere to either of these properties. First, with the exception of a few diagnoses, such as panic disorder and post-traumatic stress disorder, the onset of conditions, such as depression, schizophrenia, or GAD, is slow and insidious. People may be able to say their problem began or ended some time within a given year, for example, but cannot be more precise than this. Second, some disorders may disappear or be successfully treated, only to reappear a number of months or even years later. For these reasons, we commonly use a 6- or 12-month window, and would measure, for example, the *6-month prevalence* of a disorder; that is, the proportion of people who have had the disorder within the past half year. Another index that is frequently used is *lifetime prevalence*, or the proportion of people who have had the disorder at any time in their lives. The problem with these indices, especially lifetime prevalence, is that they are relatively insensitive to change. Even when new treatments emerge that can successfully treat specific disorders, the lifetime prevalence will not change until a significant proportion of those who previously had had the disorder die off (Streiner, Patten, Anthony, & Cairney, in press).

The second issue, whether to count as incident cases those who have had the disorder previously, is a more difficult problem to resolve. In a large measure, the answer depends on our underlying model of a disorder. For example, if we believe that schizophrenia, like rheumatoid arthritis or multiple sclerosis, is a life-long illness, interrupted by periods of relatively better functioning, then we would answer in the negative; any current diagnosable disorder is simply a worsening of a chronic, underlying condition. On the other hand, if we believe that the affective or anxiety disorders can be successfully treated, then whether or not a person has had it previously is irrelevant insofar as counting the current episode as a new one is concerned. Often,

the researcher may create decision rules, along the lines of, "The current disorder is considered to be a continuation of a previous episode if that episode ended less than XX months ago; and a new episode if the previous one ended more than XX months ago." Needless to say, the length of this period is somewhat arbitrary, although it may be based on studies of the natural history of the disorder. There is a danger, though, that these definitions, arbitrary as they are, may influence how the disorders are conceptualized. If we say that any reemergence of symptoms after 6 months is a new episode, then we may not uncover evidence of long-term consequences of a disorder. Conversely, if one, brief episode means that a person is placed in the lifetime prevalent category, then we may become unduly pessimistic about the prognosis of a disorder.

Because researchers differ among themselves regarding the width of the window and the definition of prevalent cases, readers have to be very careful in comparing the results of various studies. It may look as if estimates vary widely from one study to the other, but this may be caused by some studies using 6-month prevalence and others using 12-month, or even lifetime, prevalence rates with differing criteria of what constitutes separate episodes (e.g., Anderson, Freedland, Clouse, & Lustman, 2001).

If we use the same time window, then incidence rates and prevalence rates are related to each other. In particular,

$$Prevalence = Incidence \times Duration.$$

So, for example, if the 6-month incidence rate is 5/100,000 and the duration of the disorder is 5 months, then the 6-month prevalence rate is 25/100,000. Similarly, we can determine the duration of a disorder, as:

$$Duration = Prevalence/Incidence.$$

Incidence and prevalence rates are used for different purposes. Health-care planners, for instance, are more interested in the prevalence of a disorder, since this determines the need for clinical services. Researchers, on the other hand, are often more interested in incidence rates, as these give an indication of how disorders change over time or from one age group to another. A prime example of this can be found with the recent AIDS epidemic. Those who run hospitals, clinics, and manufacture anti-retroviral medications need to know for how many cases they must plan for the coming fiscal period (i.e., prevalence), and this keeps growing each year. Incidence data, though, show that the peak of the epidemic likely occurred around 1998 and has been declining since then, leading to hypotheses about the putative causes of the decrease.

17.2.6 Factors Affecting Incidence and Prevalence

Not only are we interested in how many people have a disorder, epidemiology concerns itself with factors that influence incidence and prevalence rates. Very roughly, we can divide these into *individual* and *group* factors. By individual factors, we mean attributes such as social support, the presence or absence of comorbid disorders, ego strength, and so forth, which vary from one person to the other. These are considered to be *predisposing* factors, which make a person more likely to have a disorder and *protective* factors, which make it less likely. For example, having one psychological condition, such as anxiety, increases the chances that a person will also suffer from another one, such as depression (Kessler et al., 1994). Conversely, social support is seen as a protector (or buffer), in that those who have more of it are less likely to develop depression in the face of stress (Aneshensel & Frerichs, 1982). Often, protective effects form complex

associations with other risk factors. So, in the example above, if stress were associated with depressive symptoms, but only for individuals who lack a supportive network of family and friends, then epidemiologists (and other scientists) would call this an interaction effect or an effect modification; this is illustrated in ❯ Fig. 17.3. Both factors need to be considered simultaneously, because the effect of one variable (stress) is contingent on the other social support.

The discussion above highlights the inherently multivariate nature of modern epidemiology. Mental disorders, like most chronic health problems, are not the result of one single causative factor, but rather a constellation of multiple risk and protective factors working together in complex ways. Multivariate risk analysis is a complex subject, quite beyond a single chapter such as this. Moreover, many other excellent works exist in this area that could be consulted (e.g., Aneshensel, 2002). It should at least be pointed out, however, that understanding "multiple" causes for single disorder is a complex issue, and a number of considerations need to be at the forefront of study design. First, the selection of possible putative risk and protective factors for a disorder must be derived systematically from one or more of the existing literature, clinical experience, and theory. Our particular bias is that a theory – biological, psychological, or social – should guide the selection of possible variables for study and analysis. Next, the specification of the nature of the association between the variable and the disorder must be made clear prior to the analysis. We have already identified at least three possible associations so far – risk factors, protective effects, and confounders – but other designations are also possible. For example, some variables are best described as *intervening* or *mediating* effects rather than confounders or effect modifiers. A variable is said to mediate the association between two other variables when, according to a given theory, the variable in question "explains" or "accounts for" the association itself. Poverty, stress, and depression could serve as an example. A popular theory in the sociology of mental health is that poverty or SES is associated with poorer mental health because individuals from low SES groups suffer disproportionately greater exposure to stress than individuals higher up the socioeconomic ladder (e.g., Turner, Wheaton, & Lloyd, 1995). In this example, stress is the mechanism (intervening or mediating effect) that explains why individuals from lower SES groups suffer higher rates of disorder and distress. Of course, other factors may also be operative. A variety of sophisticated

⬛ **Fig. 17.3**
Interaction among stress, social support, and depressive symptoms
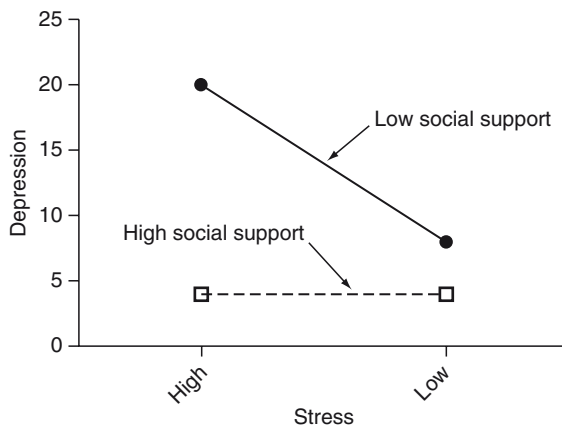
statistical techniques exists for testing mediating and/or moderating associations such as linear regression analysis, path analysis, and structural equation modeling. However, these topics are beyond the scope of this chapter.

Another way of looking at factors that influence incidence and prevalence is to examine groups (usually called "cohorts" in epidemiology) of people who share common attributes. This is usually called *APC analysis*, which stands for Age-Period-Cohort. We know that some disorders, such as Alzheimer's Disease, are more prevalent among the elderly, and that the probability of the disorder increases with age (Ferri et al., 2005). Depression, on the other hand, peaks in the mid-1940s, and then decreases with age (Streiner, Cairney, & Veldhuizen, 2006). Needless to say, this is referred to as an *age effect*. Age effects are due to the physiological effects of aging on the body, or changes in a person's circumstances that accompany the aging process, such as losses of social supports through death, changes in the person's role due to retirement or the "empty nest," and so on. In contrast to this, period and cohort effects reflect the influence of external factors on groups of people.

Cohort effects are often due to historical events that occurred at specific times. For example, people born in the 1920s were subjected to (at least) two major influences – growing up during the Depression and then living through World War II. These could affect the people in either negative or positive ways. It has been postulated that the severe famines that periodically affect sub-Saharan Africa result in protein-calorie malnutrition, and that this adversely affects cognitive development in infants (Konczacki, 1972). Conversely, having survived the Depression may have led to greater psychological resilience in the face of later stresses (Elder, 1974). Thus, a specific age cohort (i.e., people born around the same time) was exposed to factors early in their lives that have a persisting influence on their health over time (Yang, 2007).

Period effects are similar to cohort effects in that they are external to the individual. However, they affect people of all ages. A recent example is Hurricane Katrina; the trauma due to the death of family members, loss of one's home, forced relocation to another city, loss of one's job, and so forth affected everyone living in New Orleans at the time, irrespective of age. As with cohort effects, it is assumed that the effects are prolonged and have mainly negative consequences on a person's physical and/or mental health. Some period effects, though, may be positive: the introduction of anti-psychotic and anti-depressant medications in the 1950s and 1960s would have benefited people of all ages who suffer from these disorders.

Age effects are due to a person's chronological age; *cohort effects* affect people who were born around the same time; and *period effects* involve people of all ages who have lived through some change that affects their lives.

These distinctions among age, period, and cohort effects sound fairly straightforward, but they are difficult to disentangle in reality. To begin with, they are not independent from one another, because:

$$Cohort = Period - Age,$$

that is, given the calendar year (period) and the person's age, one can determine the year of birth (the cohort). Further, the results of any one study are often open to multiple interpretations. For example, ❯ Fig. 17.4 shows the 1-year prevalence of any mood disorder for people 55 years of age and older (Streiner et al., 2006). Is the overall decrease in prevalence with age due to the fact that older people are less likely to be depressed than younger ones (an age effect); or that those who were 75+ in 2002 (when the survey was conducted) were the people who were made resilient by living through the Depression (a cohort effect)? There is no way we can

Lifetime prevalence of any psychological disorder
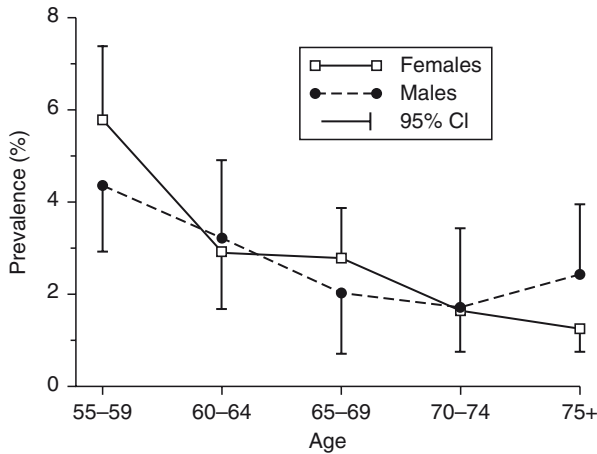
differentiate between these explanations with just these data. What would be needed is another survey, done 10–20 years earlier, so that those who were 75+ when it was conducted are in a different birth cohort.

17.2.7 Types of Risks

We have been using the term "risk factor" without adequately defining it, and indeed, although the concept seems simple at first glance, it is actually quite difficult to define. In his *Dictionary of Epidemiology*, Last (2001) defines a risk factor as

▶ an aspect of personal behavior or lifestyle, an environmental exposure, or an inborn or inherited characteristic which on the basis of epidemiological evidence is known to be associated with health-related condition(s) considered important to prevent. (p. 160)

Note, though, that this definition talks about the "association" of a risk factor with an outcome, and says nothing about causality. For this reason, some authors (e.g., Burt, 2001) differentiate among various types of risk. A *risk determinant* is a factor that is causally related to the outcome; for example, exposure to a traumatic event, which, in some people, leads to post-traumatic stress disorder. A *risk marker* is some attribute or exposure that is related to a higher prevalence of the outcome, but may not be causally related to it. It has been known for a long time that the prevalence of schizophrenia is inversely related to SES (e.g., Hudson, 2005). However, low SES may not be the cause of schizophrenia, but may either be a marker for stresses in the person's life which trigger the psychotic episode or the result of an inability to cope, resulting in a decline in social status. Finally, a *modifiable risk factor* is a determinant of an outcome that can be ameliorated, reducing the probability of the disorder. For example, children from low SES backgrounds have less exposure to books before kindergarten, resulting in poorer reading skills which persist throughout their school experience and may lead to them not completing high school. The Head Start program, which was created in 1965, tried to

remedy this through early interventions (Children's Defense Fund, 1992), although its effects are still being debated (e.g., Barnett, 1992). Bear in mind, though, that these terms are not universally used, and it is often difficult to determine whether an author is referring to a risk factor (modifiable or not) or a risk marker.

17.2.8 Quantifying Risk: Relative Risk and Relative Odds

Data about incidence and prevalence tell us how many people have a given disorder at any given time. ➤ Figure 17.4, for example, shows us that there is a higher prevalence of depression among those who are between 55 and 59 years of age than those who are over 75; and from this, we can infer that the risk of depression decreases with age. Our next job is to quantify those risks. Two different indices are used, *relative risk* (RR) and *relative odds* or the *odds ratio* (OR), depending on the type of study that was used. We will change the example somewhat, and ask whether depressed men or women are at a higher risk for committing suicide.

If we try to answer this with a cohort study, we would start with one group of depressed females and another of depressed males (gender, in this case, is likely a *risk marker*), follow them for a period of time, and count the number of suicides in each cohort. For example, Mattisson, Bogren, Horstmann, Munk-Jörgensen, and Nettelbladt (2007) began with a group of 1,823 men and 1,740 women, and followed them from 1947 until 1997. Of the 116 men and 228 women who had their first episode of depression during this interval, 17 committed suicide. The results are shown in ➤ Table 17.1. Note that, by convention, the risk factor (gender) defines the rows and the outcome (suicide) is shown in the columns. For males, the risk of suicide is 12/116 = 0.1034; and for females, it is 5/228 = 0.0219. Therefore, the RR is the ratio of the two risks, or 0.1034/0.0219 = 4.72. In other words, men are at nearly five times the risk for committing suicide as are women. If we label the four cells A, B, C, D in the usual manner, then:

$$RR = \frac{Risk\ in\ Group\ 1}{Risk\ in\ Group\ 2} = \frac{A/(A+B)}{C/(C+D)} = \frac{12/116}{5/228} = 4.72$$

Were we to do a case-control study, we would look for one sample of people who committed suicide, a matched group of people who had not, and then determine the number of males and females in each group. The results of such a study by Qin, Mortensen, and Agerbo (2000) are presented in ➤ Table 17.2. They searched a database for people who committed suicide (cases) and then assembled a much larger group of those who did not (controls). Even though

◘ **Table 17.1**

Results from a cohort study showing the relationship between gender and suicide[a]

Risk factor	Outcome		Total
	Suicide	Non-suicide	
Male	12	104	116
Female	5	223	228
Total	17	327	344

[a]Data taken from Mattisson et al. (2007).

🔲 **Table 17.2**

Results from a case-control study showing the relationship between gender and suicide[a]

Risk factor	Outcome		Total
	Suicide	Non-suicide	
Male	541	39,890	40,431
Female	270	39,981	40,251
Total	811	79,871	80,682

[a]Data taken from Qin et al. (2000).

the layout of the table is the same as for ⊙ Table 17.1, we cannot calculate the RR as we did previously. The reason is that in a cohort study, the ratios of cell A to cell B and of cell C to cell D are determined by the risk factor. However, in a case-control study, these two ratios are determined by researchers, not by the effect of the risk factor. That is, the researchers can decide to recruit any number of controls – one for each case, five for each case, or, as in the Qin study, as many as they could find. So, rather than working out the proportions across the rows, we have to use the columns. In this case, though, we will not work with risks, but with *odds*; numbers much beloved by horse racing enthusiasts. A proportion, as we saw, has the number of those with the condition in the numerator, and the total of those with and without it in the denominator; for odds, the denominator is only those without the condition. So, the odds among those who committed suicide is 541/270, or 2.004:1 in favor of males. That is, among those who took their lives, slightly more than two thirds were men. Similarly, the odds among those who did not commit suicide was 39,890/39,981, or 1.000:1, reflecting an even division between men and women. The OR, then, is 2.004/1.000 = 2.004. Writing this out:

$$OR = \frac{A/C}{B/D} = \frac{AD}{BC} = \frac{541 \times 39,891}{39,890 \times 270} = 2.004.$$

If we calculated the RR instead of the OR, we would get 1.98. This illustrates two points. First, when the prevalence of a disorder is very low (say, under 5%), then the OR provides a fairly good estimate of the RR. Second, the OR is larger than the RR. Moreover, as the prevalence increases, the OR overestimates the RR to an increasing degree, making it a less accurate estimate of what we really want to know, which is the RR.

17.3 Advanced Competencies

17.3.1 Measuring Treatment Effectiveness

The outcomes of studies that look at interventions can be measured in one of two ways: as a continuous variable (e.g., scores on a scale) or dichotomously (improved/not improved). From a measurement perspective, it is usually better to measure phenomena on a continuum, because it is more powerful and results in less loss of information than splitting people into two (or more) groups (Streiner, 2002). However, clinicians often want to know the "bottom line" – what proportion of patients actually improved enough so that they can be considered cured or functional? Simply saying that the treated group improved by ten points on a scale does not

give enough information, because even with this amount of improvement, they may still be impaired; hence, both types of outcomes are often useful. In both cases, we usually represent the difference between groups by an *effect size* (ES).

In looking at a continuous outcome, it is common to express the difference between the groups as a *standardized mean difference*, which is also referred to as *Cohen's d* (Rosenthal, 1994):

$$d = \frac{M_T - M_C}{SD},$$

where M_T is the mean of the Treatment group, M_C the mean of the Control or Comparison group, and *SD* is the pooled standard deviation of both groups. For example, assume obsessive-compulsive disorder (OCD) patients are randomly assigned to receive either cognitive behavior therapy (CBT; the treatment group) or group psychotherapy (the comparison), and the outcome is their score on the Yale-Brown Obsessive-Compulsive Scale (Goodman et al., 1989). At the end of treatment, the CBT group has a mean of 10, the group therapy condition 13 (lower scores are better), and the pooled SD is 2.5. The standardized mean difference is therefore:

$$d = \frac{10 - 13}{2.5} = -1.2.$$

This is equivalent to a *z*-score, and indicates that the treatment group's mean is 1.2 SDs below the comparison group's mean. Is this good or bad? According to Cohen's (1992) criteria, an ES of 0.2 is considered to be small; that of 0.5 is moderate; and 0.8 is large. Consequently, this would be seen as a large difference between the two treatment conditions.

When the outcome is measured as a dichotomy, the outcome is expressed as a *relative benefit*, or RB. An RB is exactly the same as an RR, except for the second word. Because we are determining how much more likely patients in the treatment group are to improve compared to the comparison group, it would be somewhat strange to define this as a "risk," but the concept and the formula are the same. As with RR, a value of 1.0 indicates no difference between the groups; numbers over 1.0 show a benefit in favor of the treatment group; and less than 1.0 shows that the comparison group did better. Let us make up a fictitious example, again using OCD treated with CBT or group psychotherapy, but now we will classify the patients as either improved or not improved according to some criteria; the results are shown in ▸ Table 17.3. The relative benefit of CBT is:

◻ **Table 17.3**

Fictitious results of treating obsessive-compulsive disorder with either cognitive behavior therapy or group psychotherapy

Treatment	Outcome		Total	Proportion improved
	Improved	Not improved		
Cognitive behavior therapy	40	10	50	0.8
Group psychotherapy	25	25	50	0.5
Total	65	35	100	

$$RB = \frac{40/50}{25/50} = \frac{0.8}{0.5} = 1.60.$$

In other words, those in the CBT condition are 60% more likely to improve than those in the group therapy condition.

While this sounds very impressive, there is a large problem with RB. Let us assume that instead of 50 subjects per group there were actually 5,000; but the number of people who improved remained the same – 40 in the CBT condition and 25 in the group-treatment condition. The RB would be:

$$RB = \frac{40/5,000}{25/5,000} = \frac{0.008}{0.005} = 1.60.$$

Again, patients receiving CBT are 60% more likely to improve, but there is a major difference. In the previous example, 80% of CBT patients got better, and with an RB of 1.6, we would be strongly inclined to adopt this form of therapy for this disorder. In the second example, we have the same RB, but fewer than 1% of the patients improved with CBT, and we would be foolish to offer patients this form of treatment (or group psychotherapy, for that matter). Obviously, the RB is masking as much as it is telling us.

What we need, then, is some statistic that takes the actual *numbers* of improved patients in both groups into account, and that statistic is the *number needed to treat* (NNT; Laupacis, Sackett, & Roberts, 1988). We have to calculate it in steps. First, rather than taking the ratio of the benefit in each group, we take the *absolute difference* in the proportion who benefited. For the first example, it would be 0.8 − 0.5 = 0.3; and for the second, it is 0.008 − 0.005 = 0.003. The NNTs are then simply the reciprocals of these:

$$NNT_1 = \frac{1}{0.3} = 3.33 \quad NNT_2 = \frac{1}{0.003} = 333.3.$$

What this means is that, in the first example, four patients need to be treated with CBT in order for one to improve more than if treated with group therapy; and in the second example, 334 must be treated for one person to benefit more with CBT than group treatment. (When there is a fraction, we always round up in order to be more conservative.) Ideally, the NNT should be 1, but it never is for two reasons. First, not everyone in the treatment group derives benefit from the therapy; in the first example, only 80% did. Second, people in the comparison group also improve, even when the control condition is placebo. The NNTs therefore tell us (a) whether the intervention under study is better than the comparison or control condition and (b) the actual number of people who are expected to do better. Thus, RBs should *always* be accompanied by NNTs.

As a rough guide, most of the behavioral therapies for depression have NNTs in the range of 2–4 when compared against wait-list controls. On the other hand, preventative medical interventions, such as medication to prevent strokes or death from hypertension or heart attacks, have NNTs that are between 100 and 1,000.

17.3.2 Counting Negative Outcomes

Various psychiatric disorders result not only in increased suffering on the part of the patient, but also in an increased probability of premature death. There are a number of different

indices that are used to express this increased risk, depending on what aspect of the risk one is interested in.

Case-fatality rate. The case-fatality rate (CFR) is the proportion of people with a specific disorder who die because of it within a given time. That is, the 1-year CFR is:

$$CFR_{1Year} = \frac{Number\ of\ Deaths\ in\ a\ Year}{Number\ of\ People\ with\ the\ Disorder}.$$

Saha, Chant, and McGrath (2007) did a meta-analysis of 37 studies of mortality in schizophrenia, and found that the CFR was 95.4 per 100,000 population. This means that in every year, slightly under 1% of schizophrenics die, either because of the disorder or (in this case) partly because of the treatment. They hypothesized that the CFR has been increasing since the 1990s because of the introduction of the atypical antipsychotic medications, which treat the disorder, but also lead to significant increases in weight and the prevalence of Type II diabetes.

Proportional mortality rate. A difficulty with the CFR is that we do not always know what the denominator is. For example, to test Saha et al.'s (2007) hypothesis that the increased mortality rate is due to the parallel increase in the use of atypical antipsychotics, we would really need to know the number of patients with schizophrenia who are taking this class of drugs. Such data rarely exist at a nation-wide level, so we would have to do a study simply to get that number. We may be able to get funding to do this once, but it is impractical if we want these data on a regular basis, in order to look at trends over time. Data that do exist through the census and other national surveys are the total number of deaths in a year, and the number of deaths from a particular cause. We can use these to calculate the *proportional mortality rate* (PMR), which is the proportion of deaths due to a specific disorder:

$$PMR = \frac{Number\ of\ Deaths\ from\ a\ Particular\ Cause}{Total\ Number\ of\ Deaths}.$$

Thus, if we knew the total number of deaths among schizophrenic patients, and the number that are due to diabetes (and such data are available through various registries), we could determine if the proportion dying from this disorder has changed significantly since the atypicals were introduced. There is, though, one problem with the PMR. It may increase for two reasons: (1) there are, in fact, more deaths from this disorder or (2) there are fewer deaths due to other causes. An unfortunate fact of life is that over the long haul, the case fatality rate is 100% – everyone is going to die from something. As we get better at treating heart disease, cancer, infectious diseases, and so on, the PMRs for the other, chronic and untreatable disorders, such as Alzheimer's Disease or diabetes will of necessity increase.

Standardized mortality ratio. One problem with the CFR is that it is difficult to interpret what the number means. Is a CFR of 95 per 100,000 people high or low? In the Saha et al. (2007) study, the interest was in the change in the CFR over time, so the absolute value was of secondary importance, but we still do not know whether the final value is anything to be concerned about. One solution is to calculate the *standardized mortality ratio* (SMR), which is the ratio of the number of observed deaths to expected deaths for a specific disorder:

$$SMR = \frac{Number\ of\ Observed\ Deaths}{Number\ of\ Expected\ Deaths}.$$

An SMR of 1 indicates that the observed mortality rate is exactly equal to the expected rate; a number above 1 shows that the observed mortality rate is higher and less than 1 indicates that it is lower. Most often, the number of expected deaths is derived from the general population. Saha et al. found that the median SMR for all causes of death in people with schizophrenia was 2.58, meaning that their mortality rate was 2½ times higher than for the population at large. They were also able to calculate cause-specific SMRs; that for suicide was the highest (12.86), indicating that those with schizophrenia committed suicide at a rate nearly 13 times higher than in the general population.

Age-standardized rates. There are times when standardizing with reference to the general population is not specific enough. This may occur when the population of those with the disorder differs from the general population in terms of some key demographic variables, such as age or gender. For example, Fernquist and Cutright (1998) were interested in whether suicide rates are comparable across 21 developed countries. The problem is that the probability of committing suicide increases with age, and the age distribution of the population differs from one country to the next. If one country has a higher rate of suicides than the others, it could mean either that (a) the suicide rate is, in fact, higher in that country or (b) it has a higher proportion of older people, who are more likely to commit suicide. For example, the rate of suicides among people 60 years of age and older can be the same in two different countries, but if the first country has proportionally more elderly, then it would appear to have a higher suicide rate in comparison to the second. The solution is to *age-standardize* the rates by comparing them all to a reference population, broken down by age. The choice of the reference population can be critical, because using different standards can result in different conclusions. When comparisons are made within a given country (e.g., looking at differences across states or provinces), the population of the entire country is used. For international studies, a number of "reference populations" have been proposed. The "European" standard was developed in Scandinavia; it is appropriate for studies in developed countries, but is weighted toward the upper end of the age spectrum (Doll & Cook, 1967), reflecting the demography of northern Europe. The "world" standard, proposed by Segi (1967), is based on 46 countries world wide, and is not as heavily weighted by the elderly. More recently, the World Health Organization (WHO) has issued standards based on the population of the world, and broken down by both age and gender. In addition to its scope, an advantage of the WHO standard is that the data are updated every 5 years (United Nations, 2006).

To illustrate the procedure, let us compare two countries, each with a population of 1,000,000 people, that have very different age structures. Country A is a typical developing country with a large proportion of people under 30 years of age and Country B is a developed country with an aging population. The data are shown in ❯ Table 17.4.

If we look at the bottom row, we see that Country A has had 19,300 suicides in the year (column d); whereas there were 43,500 suicides in Country B (column h). So, just examining the crude number of suicides, it looks as if there are 2.25 times as many in Country B than in Country A. However, if we compare the suicide rates within each age decade (columns e and i), we see they are the same in both places. Multiplying these age-corrected rates by the population weight (column b), which reflects the proportion of people around the world, we find that the age-corrected suicide rates are the same, as are the age-standardized rates for the countries as a whole (2.50). Thus, age-standardization has removed the effect of the different age structures, giving us a more accurate picture of what is happening in the two places.

Bear in mind, though, that all of the indices we have discussed – ORs, RRs, NNTs, and the rest – are point estimates derived from studies. As with all point estimates, they are accurate

■ Table 17.4

Age-standardization for suicide rates in two fictitious countries

Age group	Wt.	Country A				Country B			
		Population	No. of suicides	Suicide rate	Weighted rate	Population	No. of suicides	Suicide rate	Weighted rate
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
0–9	22	300,000	0	0.00	0	50,000	0	0.00	0
10–19	18	250,000	2,500	0.01	0.18	50,000	500	0.01	0.18
20–29	16	150,000	3,000	0.02	0.32	100,000	2,000	0.02	0.32
30–39	12	90,000	2,700	0.03	0.36	100,000	3,000	0.03	0.36
40–49	12	70,000	2,800	0.04	0.48	200,000	8,000	0.04	0.48
50–59	9	60,000	3,000	0.05	0.45	200,000	10,000	0.05	0.45
60–69	7	40,000	2,400	0.06	0.42	150,000	9,000	0.06	0.42
70–79	3	30,000	2,100	0.07	0.21	100,000	7,000	0.07	0.21
80+	1	10,000	800	0.08	0.08	50,000	4,000	0.08	0.08
Total	100	1,000,000	19,300	0.0193	2.50	1,000,000	43,500	0.0435	2.50

only to the degree that the studies themselves were well executed. That means that there should be no systematic biases regarding who did and did not get into them that may distort the findings, and that the sample sizes were large enough so that the confidence intervals around the estimates are relatively small. The old adage of "garbage in – garbage out" applies in full force in epidemiology; sophisticated analyses cannot correct bad design.

17.4   Summary

Epidemiology is a branch of research that focuses on counting the number of cases of a disorder in the population, with the aim of discovering those factors that influence its incidence and prevalence. As we have seen, "counting" is not always an easy or straightforward proposition, and requires a knowledge of research design, sampling, measurement theory, and statistics. Further, psychiatric epidemiology is heavily influenced by theory, especially (at least in North America) by theories arising from the social determinants of health. It is a relatively new field of study in psychology, but one that promises to grow in scope and influence over the coming decades.

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18 Literature Reviews and Meta Analysis

Joseph A. Durlak

Abstract: This chapter discusses the most common research methodology in psychology: the literature review. Reviews generally have three purposes: (1) to critically evaluate and summarize a body of research; (2) to reach some conclusions about that research; and, finally, (3) to offer suggestions for future work. The basic and expert competencies required for completing a high quality literature review are described by discussing seven major components of reviews along with relevant questions that should be answered to assess the successful completion of each component. A major focus is on meta-analysis, but guidelines are pertinent in assessing the quality of various types of reviews including reviews of theories and clinical applications. Readers are directed to additional helpful resources in order to aide them in becoming critical consumers or producers of good literature reviews.

18.1 Overview

What is the most common research method in psychology? Is it a correlational study, a qualitative case study, an *N* of 1 within-subject design, a quasi-experimental design, or a randomized true experiment? It is none of these. Without question, the most common research method used in psychology is the literature review. Everyone who does any type of study or prepares any type of research report begins with a literature review. This is as true for every author of a professional publication, a technical report, or a grant proposal as it is for every graduate student who does a masters thesis or dissertation. The type and depth of these reviews vary depending on the circumstances, but reviews generally have three general purposes: (1) to critically evaluate and summarize a body of research, (2) to reach some conclusions about that research, and, finally, (3) to offer suggestions for future work.

Literature reviews have become a highly valued research method. Some highly respected journals publish only reviews (e.g., *Annual Review of Psychology, Psychological Bulletin, Review of Educational Research*), and many journals publish reviews periodically. A conservative estimate is that over 300 published literature reviews appear in the social sciences each year. Some reviews become highly influential and receive many citations as others have recognized the important contributions that reviews have made in different research areas.

The fifth edition of the Publication Manual (American Psychological Association, 2001) describes review articles, including meta-analyses, as critical evaluations of previously published material:

▶ By organizing, integrating, and evaluating previously published material, the author of a review article considers the progress of current research toward clarifying a problem. In a sense, a review article is tutorial in that the author: defines and clarifies the problem; summarizes previous

investigations in order to inform the reader of the state of current research; identifies relations, contradictions, gaps, and inconsistencies in the literature; and suggests the next step or steps in solving the problem. (p. 7)

Three qualifications should be made with respect to these statements.

First, reviews often evaluate unpublished as well as published materials. Second, although this chapter focuses on research reviews, it is also possible to review theories, policies, and aspects of clinical practice. For example, one might review therapeutic techniques used with certain types of clients, or assessment procedures for different problems or clinical situations. Many of the comments offered with respect to research reviews also pertain to other types of reviews. In other words, has any review been conducted and reported carefully enough so that its major conclusions and implications can be accepted with confidence? Third, for the first time, the next edition of the APA Manual will include detailed guidance on the conduct and reporting of meta-analyses (H. Cooper, personal communication, August 21, 2007).

Because a literature review is a bona fide research strategy, one can focus on the general methodology for doing reviews, and reviews can be evaluated according to how well this methodology has been followed. Just like any other research method, literature reviews vary in quality; some are very well done, whereas others are not. The term quality as used here refers to the scientific rigor of the review or to the extent to which the reader can place confidence in the major conclusions and implications of the review. A poorly done research study does not inspire much confidence in its findings and neither does a poorly done literature review. However, a well-done review makes a major contribution by its up-to-date evaluation of past research and suggestions for what type of future research can best advance the field.

The major purpose of this chapter is to discuss the basic and expert competencies related to conducting and reporting literature reviews. This is done by discussing the major components of reviews along with relevant questions that should be answered to assess the successful completion of each component. Space does not permit discussion of all the relevant issues, but useful resources on different aspects of literature reviews are offered throughout this chapter.

This chapter devotes its attention mainly to meta-analysis, which is one type of a literature review, but many comments are applicable to all types of reviews including those done as part of a student's thesis or dissertation. The following section provides an overview of meta-analysis. Then, the major components of a review are discussed along with the relevant questions that pertain to the quality of a review. The last sections of the chapter describe the basic and expert competencies required for conducting and reporting literature reviews and the typical processes whereby these competencies are acquired.

18.2 What Is Meta-analysis?

In the past 2 decades, research on meta-analysis has become increasingly sophisticated as researches have continued to refine the technique and examine how it can be applied and modified, if necessary, depending on the specific characteristics of the studies and outcome data being reviewed. Therefore, this chapter focuses only on the basics of meta-analysis. The reader is referred to several user-friendly resources that contain further explanations of meta-analyses (Durlak, 1995, 2000, 2003; Durlak, Meerson, & Ewell-Foster, 2003) as well as texts that also contain explications of more advanced statistical issues and analytic procedures (Hedges & Olkin, 1985; Hunter & Schmidt, 2004; Lipsey & Wilson, 2001; Wolf, 1986).

Also called a quantitative review, a research synthesis, or a systematic review, a meta-analysis is a quantitative analysis of a research area in which the findings from studies are transformed into a common metric, the effect size, which is then pooled and analyzed. The overall goals of a meta-analysis are the same as any review which were noted earlier (i.e., critically evaluate and summarize a body of research, reach some conclusions about that research, and offer suggestions for future work). The unique feature of a meta-analysis is its ability to quantify the magnitude of the findings via the effect size. Although there are many different types of effect, the three most commonly used indices are standardized mean differences (SMDs), the product-moment correlation, r, (see Rosenthal, 1991) and the odds ratio (see Fleiss, 1994; Haddock, Rindskopf, & Shadish, 1998). Product moment correlations are primarily used to synthesize the findings from correlational studies, and the odds ratio is preferred when outcome data are truly dichotomous (e.g., meeting diagnostic criteria, graduation, or arrests). This chapter focuses on treatment-meta-analyses that is, reviews that evaluate the impact of one or several different types of treatments or interventions based on studies involving treatment versus control group comparisons. These types of meta-analyses usually use SMDs as the index of effect although the statistical properties of the data set must be considered in the choice of the most appropriate index of effect (McGrath & Meyer, 2006; Ruscio, 2008).

An SMD is usually calculated by subtracting the mean of the control group at post from the mean of the intervention group and dividing by the pooled standard deviation of the two groups (Hedges' g or Cohen's d, depending on the exact method of calculation (see Durlak, in press). When means and standard deviations are unavailable, there are other ways to estimate an effect size from a study (Lipsey & Wilson, 2001). Dividing by the pooled standard deviation thus creates a "standardized" metric that can be used across studies, and SMDs are usually given a sign suggesting the superiority of the intervention over the control group at post. Therefore, an SMD of +0.50 from one treatment study is similar in magnitude to an SMD of +0.50 drawn from another study. Each SMD represents one half of a standard deviation and suggests the interventions in two studies were equally effective.

It is important to keep in mind that there is no straightforward relationship between the statistical significance of an outcome that might be attained in a study and its effect size. A statistically significant finding can yield an SMD that might be low, medium, or high in magnitude. In other words, SMDs convey information that is different from that of customary tests of statistical significance; SMDs in treatment with meta-analyses describe the *magnitude* of the difference between two groups (Vacha-Haase & Thompson, 2004).

The ability of an effect size to transform the unique data from different studies into a common metric creates the opportunity for the reviewer to examine several potentially important research questions. For example, what is the overall mean effect averaged across all interventions? What factors or variables might affect this overall result? Does this mean effect differ for young or older clients, for those with different problems, and so on. Carefully conducted meta-analysis can be a powerful tool for assessing a research area.

18.2.1 Components of a Scientifically Rigorous Review

❯ Table 18.1 lists seven major components of a scientifically rigorous review and poses several primary questions to be asked and answered regarding the review. These components and their accompanying questions have been synthesized from a variety of sources as noted

◼ **Table 18.1**

Major components of a scientifically rigorous literature review

1. Is the review well-written?
  A. Does the review contribute new knowledge to the field?
  B. Is the review well-organized to tell a logical, coherent, convincing story?
  C. Is the prose clear, coherent, and concise?
  D. Is the take-home message clear and emphatic?

2. Formulation of a good research question
  A. Is the purpose of the review described clearly?
  B. Is the research topic important, empirically, theoretically, or practically?
  C. Are the research questions reasonable and testable?
  D. Are a priori hypotheses offered?*

3. Reviewing all the relevant literature
  A. Is the scope of the review appropriate?
  B. Is the review up-to-date?
  C. Are there explicit criteria about which type of studies were included or excluded?
  D. Are multiple search strategies used?
  E. Are unpublished studies included?*

4. Deriving maximal information from individual reports
  A. Was the influence of methodological features evaluated?
  B. Was the extent of missing or limited information acknowledged?
  C. Is a clear rationale presented for the coding of the major variables?*
  D. Is the coding of studies reliable?*

5. Conducting appropriate analyses
  A. Do the analyses competently address the major research question(s)?
  B. Are clear distinctions made between primary and exploratory analyses?
  C. Are discrepant or contradictory findings handled appropriately?
  D. Is one effect per study used per research question?*
  E. Were effects weighted before analyses*
  F. Were statistical outliers identified?*
  G. Were studies grouped appropriately for analyses?*
  H. Did the review consider and rule out some likely rival explanations for the results?

6. Reaching conclusions and advancing the field
  A. Is the take-home message emphatic and clear?
  B. Were the major conclusions clearly supported by the evidence?
  C. Were appropriate qualifications to the main conclusions offered?
  D. Was the practical significance of the findings assessed?
  E. Were the findings placed in an appropriate context?
  F. Were the implications for theory, policy or practice discussed?
  G. Does the review identify critical directions for future research?

The features marked with an * apply to meta-analyses while the others apply to all types of reviews. Material is drawn from Bem (1995), Drotar (2000), Durlak (2000, 2003), Durlak et al. (2003), Galvan (2004), Oxman (1994), and Sternberg et al. (1997).

at the bottom of the table. In effect, the questions in ❯ Table 18.1 can be used as criteria to judge the quality of a review, keeping in mind that quality is not an all-or-none construct but something that lies along a continuum that ranges from very low quality to the highest quality. The list of questions is not exhaustive but do pertain to the major aspects of reviews.

Another perspective concerning good reviews comes from data reported by Sternberg, Hojjat, Brigockas, and Grigorenko (1997) as to what qualities of reviews are associated with their eventual publication. These authors analyzed reviewers' quantitative ratings of manuscripts, and a factor analysis suggested the presence of three separate dimensions: analytic, creative, and practical. These dimensions overlap with those presented in ❯ Table 18.1. For example, the analytic dimension consists in answering the major question: How well does the author analyze the relevant literature (components 3D, 3E, 5A, and 5C in ❯ Table 18.1). The creative contribution revolves around the question: Does the review make an important contribution to the field (related to components 1A and 2B in ❯ Table 18.1). Finally, the practical dimension is relevant to how well the review is written (components 1B, 1C, 1D, and 3A). Each of Sternberg et al.'s (1995) three dimensions was important; each was a significant and comparable predictor of the eventual publication of review articles in *Psychological Bulletin*. In other words, it is helpful to keep in mind that the creative and practical aspects of a review are just as important as its technical aspects. The following sections discuss each of the components listed in ❯ Table 18.1 in an effort to describe what makes for a scientifically rigorous review.

18.2.1.1 Is the Review Well-Written?

The importance of good writing cannot be over-emphasized. A reviewer might have important findings to share, but if the purpose, conduct, findings, and implications of the data are not written up properly, the review's impact will be greatly diminished. In fact, the review might never be published. Reviews should be well organized to tell a logical, coherent, and convincing story to maintain readers' interest and to culminate in a clear and emphatic take-home message that makes a contribution to the field. Because reviews are designed to teach readers something new, the entire review should be composed to highlight the take-home message.

Sternberg (1991) offered this wise advice to would-be authors of reviewers:

▶ Literature reviews are often frustrating because they offer neither a point of view nor a take-home message. One is left with a somewhat undigested scattering of facts but little with which to put them together. I encourage authors to take a point of view based on theory and to offer readers a take-home message that integrates the review….. [reviews that are lively and maintain reader interest] need to make a point, not simply to summarize all the points everyone else has made. (p. 3)

Finally, the prose should be clear, coherent, and concise. As Bem (1995) indicates, good scientific writing is accurate, clear, simple, direct, and organized to tell a coherent story. Galvan (2004) also offers excellent suggestions on how to write and, most important, how to self-edit an effective literature review.

18.2.1.2 Reviewing the Relevant Literature

An important requirement for a good review is that the relevant literature has been reviewed, although a truly comprehensive review of every report is usually impossible to achieve. There are over 20,000 outlets for published and unpublished research (Cooper & Hedges, 1994) and new outlets appear each year, especially on the Internet. Therefore, the central task of the reviewer is to search carefully for as many relevant studies as possible in order to avoid bias in the identification and inclusion of studies.

The search for relevant literature should be based on reasonable inclusion and exclusion criteria that are articulated by the reviewer so that readers can understand what type of research is relevant or not. For example, at a minimum, the reviewer should specify the starting and ending dates of the literature search, and what are the characteristics of the samples, study designs, interventions, and outcomes of interest. The presence of clear and reasonable explanations for why some studies are included whereas others are not, allows for a focused review that can answer specific research question. For example, one reviewer might be interested in group treatment for school-aged youth who are anxious or depressed, and only evaluate reports that measure anxiety or depression as outcomes. Another reviewer might be interested in both individual and group interventions for young aggressive children (ages 3–10). It is up to the reviewer to justify why certain types of studies are being reviewed and others are not.

Multiple search strategies are essential for finding relevant studies and the three most successful strategies usually consist of: (1) manual searches of the abstracts or method sections of journals that have published relevant studies; (2) examination of the references of each obtained study; and (3) computer searches of multiple data bases. Although computer searches can be done quickly, they should *not* be the primary search strategy. Computer searches have been known to identify only a small minority of relevant studies (i.e., less than 20%) compared to the other two approaches mentioned earlier (Durlak, 2000). This is because computer databases do not include all possible outlets, often do not thoroughly sample books and book chapters, are modified over time (making a consistent search over the same data base more difficult), overlook the most recent studies due to a time-lag related to their updating, and may not contain the search terms that exactly fit a reviewer's requirements. One of the skills in reviewing depends on learning the standardized search terms and their variants that comprise each database and how to conduct overlapping computer searchers of these databases to assure more relevant studies are identified (Taylor, Wylie, Dempster, & Donnelly, 2007). Reference librarians are a useful resource for learning effective search strategies for different databases.

Reviews should strive to include unpublished studies due to the possibility of publication bias, which refers to the reluctance of editors to accept and authors to submit reports that contain nonsignificant results (Dickersin, 1997). In other words, a review of only published studies might over-estimate the true effect size because only published results with positive findings are reviewed and unpublished material with negative results are not included. However, unpublished studies (e.g., doctoral dissertations, conference papers, technical reports, and unsubmitted papers contained in researchers' file drawers) do not always contain lower effect sizes than published reports (Wilson, Gottfredson, & Najaka, 2001). One can never be sure about the existence of publication bias; much depends on the care taken to locate published and unpublished literature and the data they contain. Different methods to estimate the degree to which publication bias might influence the findings are available and authors have discussed the situations in which they should or should not be used (Peters, Sutton, Jones, Abrams, & Rushton, 2007; Terrin, Schmid, Lau, & Olkin, 2003).

18.2.1.3 Deriving Maximal Information from Individual Reports

The prime goal in coding studies is to capture all the potentially important information from each study (i.e., those independent variables that might affect the findings and conclusions of the review). Which variables should be coded?

Meta-analysts should rely on past research to guide their choices. Usually, meta-analysts develop a coding system (that is available to interested readers) that focuses on various theoretical, clinical, practical, and methodological features of each study that prior research or theory has suggested could be important. For example, coding might involve among other things, which types of treatment techniques were used, who were the clients, what was the nature and seriousness of their presenting problems, who administered the treatment, and what outcomes were assessed. The review should contain examples of how the major variables of interest (i.e., those related to the reviewer's a priori hypotheses) were coded and why these variables might be important.

The experimental features of the studies should also be coded for two important reasons: (1) the experimental rigor of the reviewed studies often affects the confidence that can be placed in the findings and (2) methodological features frequently affect study outcomes (Wilson & Lipsey, 2001). Exactly, which methodological aspects are important and how they affect findings are empirical questions that meta-analysts can ascertain through statistical analyses (see below). Moreover, there is no standard way to evaluate the experimental quality of each study; different issues might be important depending on the particular research area. Once again, prior research probably suggests which variables to consider. For example, outcomes might vary based on psychometric properties of the outcome measures, from where the data are obtained or who does the treatment. Therefore, it is important to assess if effects differ based on reliability and validity of the outcome measure, whether youth, parents, teachers, or independent observers provided the outcome data, or if the loss of participants during the course of the study (i.e., sample attrition) makes a difference. Several meta-analyses have documented that implementation influences outcomes so the extent to which the intended intervention was conducted as planned should also be evaluated (Durlak & Dupre, 2008).

Meta-analyses should calculate and report the methods used to code studies and the reliability of the coding system. Usually, the complete coding manual is made available to interested readers or posted on a Web site. Choice of a reliability estimate depends on the nature of the coding (e.g., continuous or categorical variables, their frequencies with the study sample, and the number of coders used). Hartmann (1982) offers useful guidance on choice of reliability methods.

18.2.1.4 Conducting Appropriate Analyses

Analyses can be complicated because the original research being reviewed is complicated, and this section focuses on some common strategies and situations. Variability is the challenge that faces most meta-analysts. There is often substantial variability in the outcomes of a research area. This is not surprising. If each researcher always obtained the same result, there would not be a need for any more studies. We would know very well what to expect from an intervention. However, there is also substantial variability in the ways researchers conduct their studies. They design their studies differently, recruit different size samples, involve different types of participants (e.g., in terms of age, gender, cultural background, and level of adjustment), work in different communities and contexts, measure outcomes in different ways, and modify or change

aspects of the intervention. The challenge for a meta-analyst (just as it is for anyone conducting a literature review) is to deal with the simultaneous variability in study characteristics and outcomes in a systematic, analytic way in order to arrive at scientifically sound conclusions and implications.

The effect size is the dependent variable in a meta-analysis and all the features of the reviewed studies are the independent variables. Each independent variable (i.e., study feature) could moderate the outcomes (i.e., be associated with lower or higher effect sizes). The challenge for the meta-analyst is to determine which independent variable or combination of variables, if any, affects the dependent variable.

Prime Considerations Concerning Effect Sizes. Studies usually vary in how many outcomes they examine, and it is important in a meta-analysis to use only one effect size per study in each analysis. Otherwise, a study with, say, six outcomes, automatically receives six times more importance in the analysis than a study with only one outcome. It is extremely helpful in most meta-analysis to divide the types of outcomes found in reviewed studies into different categories and analyze each category separately. For example, do treatments for students affect levels of academic achievement as well as they affect levels of depression or self-confidence?

However, meta-analysts should weight each effect size by the inverse of its variance before conducting any analyses (Hedges & Olkin, 1985). This procedure gives more weight to studies conducted with larger samples, which is important because such studies provide more reliable estimates of the true population effect than studies with smaller samples. Authors should also inspect the distribution for possible outliers, that is, very aberrant findings that are much higher or lower than the rest of the distribution and make and defend their choice of which type of statistical model (random effects, fixed effects, or a combination) was used in the analyses (see Lipsey & Wilson, 2001).

Importance of Confidence Intervals. Meta-analysts should also calculate confidence intervals (CIs) around all mean effects (Hedges & Olkin, 1985). Usually, 95% CIs are calculated, but intervals at other levels can be used with appropriate justification. CIs are essential in evaluating the precision of meta-analytic findings by providing the range of likely values around any obtained mean effect. When CIs do not include zero, the mean effect is statistically different from zero, and when different means are compared their corresponding CIs assist in determining (along with the *Q*-between statistic; see below) if the means differ significantly from each other.

For example, suppose in a meta-analysis the mean effect for one subgroup of studies (Group A) was 0.20 with a 95% CI from 0.05 to 0.35 while the mean of the other subgroup (Group B) was 0.60 with a 95% CI of 0.10–0.90. Although the mean effect for Group B is three times higher than for Group A, the two means do not differ significantly from each other because the CIs for the two groups overlap to a substantial degree. This is because the CI for Group A indicates that the mean effect is likely to range between 0.05 and 0.35, while the CIs for Group B (0.10–0.90) include much of this range. In this example, the CI for Group B includes 83% of the range of the CI for Group A. The large CIs obtained for Group B tell us that with repeated replications it is likely that the obtained means for the two groups could be very close together and not differ by a magnitude of three as found in this one meta-analysis.

Cumming and Finch (2005) have indicated that researches are often too conservative when interpreting the statistical difference between two means. They stress that if mean CIs do not overlap at all, the means should be interpreted as significant at the 0.01 level (even if 95% CI is used), and they have developed a procedure to determine if means differ at the 0.05 level by testing the degree of overlap in the CIs. In sum, CIs represent a range of plausible values for the true population effect compared to the estimate of the effect obtained in a meta-analysis.

Narrower CIs indicate more precision in the estimate of the true effect. Readers often have difficulty interpreting the meaning of CIs. If 95% CIs are used, then in 95 of 100 replications of the meta-analysis, the true population value of the ES would fall somewhere within the CI.

Grouping Studies for Analysis. Early criticisms of meta-analyses often focused on the "apples and oranges" problem. That is, the concern was that reviews were combining groups of studies that were so conceptually different that they should not be combined.

One preferred way to assess variability in a meta-analysis is to use the Cochran Q statistic which can be supplemented with another statistic, I^2 (Higgins, Thompson, Deeks, & Altman, 2003). The Q statistic assesses whether there is a statistically significant degree of variability present in a group of effect sizes. That is, is there more variability present than one would predict based on sampling error alone? If the Q statistic is *not* statistically significant, than the group of studies is likely to be estimating the same population effect. I^2 values assess the *degree* as opposed to the statistical significance of variability along a 0–100% scale and can be interpreted in the following fashion: 0% represents no variability at all; 25% low, 50% moderate, and 75% or more, a high degree of heterogeneity. Illustrations of the use of Q and I^2 can be found in Cuipers, van Straten, and Warmerdam (2007) and Durlak, Weissberg, and Pachan (in press).

When studies are subdivided into groups to test for moderation, the Q statistic is analogous to an ANOVA in the sense that total variability in effects for all the studies consists of the variability found within- and between-groups of studies. The desired finding in a test for moderation is to obtain statistically *nonsignificant Q* statistics *within groups* with accompanying low I^2 values but a statistically significant Q statistic *between groups* with high I^2 values. Inspection of the group means would indicate which group had the higher or lower effects. ❯ Table 18.2 offers some hypothetical data to illustrate how a hypothesis can be evaluated using the Q statistic and I^2 values. In this example, 66 studies were reviewed in which children and adolescents having symptoms of both depression and anxiety received cognitive-behavioral therapy. The reviewer provided a rationale for hypothesizing that adolescents would receive significantly more benefit from treatment than younger children. The data from Example A in ❯ Table 18.2 confirm the reviewer's hypothesis for measures of depression, but the data from Example B do not confirm the hypothesis for anxiety outcomes. Why?

Note that the reviewer first examined the variability in effects for both depression and anxiety outcomes across all studies and obtained a statistically significant Q statistic (76.75 and 21.96) and corresponding I^2 values reflecting a moderate (50% for Example B) or high degree of heterogeneity (75% for Example A). In other words, the total group of studies in each case was not estimating the same population effect and a search for possible moderators was justified. However, when the studies were divided according to the age of the participant sample, the hypothesis that adolescents would benefit significantly more than 10–12 year old children was confirmed only for depression outcomes.

In Example A, the Q-within statistics for each subgroup of studies ($k = 27$ and 39) were no longer statistically significant with accompanying low I^2 values (5% and 18%) and the Q-between was highly significant as predicted. The mean of the two groups was 0.07 for younger and 0.32 for older children with non-overlapping CIs.

However, in the case of anxiety, even though Q-within statistics were not statistically significant and I^2 values were low (0% and 7%), the Q-between statistics was *not* significant and there was no heterogeneity at all (0%) between the groups' effect sizes. Also note that although the mean effect for adolescents on anxiety outcomes was higher than for younger children (0.37 to 0.14, respectively) the mean CIs overlapped considerably (−0.26–0.54 and 0.24–0.46). Example B illustrates that one should not merely compare mean effects; CIs and additional

🔷 **Table 18.2**

Hypothetical findings illustrating confirmation (Example A) and disconfirmation (Example B) of hypothesized moderation

Example A: Outcomes for depression outcomes							
Studies	SMD	k	95% CI	Q-within	I^2	Between groups	
						Q-between	I^2
All programs	0.22[a]	66	0.10–0.45	76.75[a]	75%	NA	NA
10–12 year old children	0.07	27	−0.01–0.15	12.01	5%		
13–18 year old youth	0.32[a]	39	0.25–0.39	46.26	18%	18.48[a]	95%
Example B: Outcomes for anxiety outcomes							
All programs	0.33[a]	22	0.23–0.45	21.96[a]	50%	NA	NA
10–12 year old children	0.14	2	−0.26–0.54	0.67	0%		
13–18 year old youth	0.35[a]	20	0.24–0.46	20.36	7%	0.93	0%

[a] Denotes a finding that is statistically significant at the 0.05 level.

statistical analyses should be conducted to assess if any between-mean differences are statistically significant and to assess their magnitude.

The examples in ◉ Table 18.2 involve one possible moderator, two subgroups, and two outcomes, but analyses become more complicated with additional moderators, groups, and outcomes. Meta-regression can be used to test for multiple possible moderators, but before predictor variables are entered into the regression their correlation should be checked to avoid multi-colinearity.

18.3   Ruling Out Alternative Explanations

For both examples in ◉ Table 18.2, the meta-analyst should examine other possible variables that might influence effect sizes. Methodological features often are associated with effect sizes, although there is no standard way to determine methodological quality or rigor. Sometimes single variables, such as randomization to conditions, levels of attrition, or the reliability of the outcome, are related to effect sizes. Other times, a multivariate approach is used. Several method variables are combined in a scale and then the mean effects of studies categorized as high, medium, or low in experimental quality are compared. The reviewer should justify whatever approach is taken.

18.3.1 Reaching Appropriate Conclusions and Advancing the Field

Clearly stating and explicating the major conclusion of a review produces the take-home message, and the value of conducting and describing the steps of a review so as to present a coherent, logical, and convincing argument has already been noted. Reviewers should also offer

appropriate qualifications to their conclusions depending on the limitations found in the database, because such limitations should be a focus for future research. For example, notice that only two studies in ❯ Table 18.2 assessed anxiety outcomes for 10–12 year old children. The need for further research on this population would be pointed out.

Implications that findings have for theory and practice should be emphasized. Furthermore, the practical significance of the results should be discussed and there are now several ways a meta-analyst can illustrate the practical benefits of obtained effect sizes (Cooper, 2008; Hill, Bloom, Black, & Lipsey, 2008; Randolph & Edmondson, 2005; Rosenthal & Rubin, 1982; Valentine & Cooper, 2003). The magnitude of the effect is only one consideration; other factors include types of outcomes being modified, populations studied, findings from previous research, and the inherent value or "real-world" benefit of the types of changes suggested by the outcomes.

Interpreting Effect Sizes. A reviewer has to explain the meaning of the effect sizes obtained in a meta-analysis. What do average effects of 0.25, 0.55, or 0.60 mean (Durlak, in press; Vacha-Haase & Thompson, 2004; Volker, 2006)? It is essential to place current findings in a research context. Lipsey and Wilson (1993) provide one context for judging the effects of treatment meta-analyses. They analyzed the results of 156 meta-analyses assessing behavioral, psychological, and educational treatments. The overall mean from these meta-analyses that contained 9,400 studies and over 1 million participants was 0.48 with a standard deviation of 0.28, suggesting that two thirds of the mean effects fell somewhere between +0.19 and +0.75; 16% were higher than +0.75 and an equal percentage were below +0.19. However, Lipsey and Wilson's (1993) data were taken from reviews of treatments for individuals who had varying and often serious psychological, behavioral, or academic problems, so their findings do not apply to all types of interventions. For example, universal or primary prevention programs focusing on general populations who are not manifesting any initial problems tend to obtain lower mean effects on many outcomes (Durlak, Weissberg, Taylor, Dymnicki, & Schellinger, in press).

Furthermore, some outcomes are much more difficult to modify than others. One compilation of 76 meta-analyses of academic interventions indicated that mean effects were 0.23 for students in elementary school, 0.27 for those in middle school, and 0.24 for those in high school when achievement test scores were the outcome (Hill et al., 2008). While higher effects would, of course, be desirable, a mean effect of 0.24 translates into a 9.5 percentile gain in achievement for the intervention group over the controls. Many educators would welcome an intervention that might boost the academic performance of their student body by nearly 10 percentile points.

Many authors reporting effect sizes from individual studies or meta-analyses have invoked Cohen's (1988) convention that effects of around 0.20 are small in magnitude, those around 0.50 are moderate and those ≥0.80 are large; the corresponding figures for correlations as an index of effect are 0.10, 0.30, and 0.50. However, Cohen (1988) offered these conventions cautiously only as a general rule of thumb that could be used in the absence of prior empirical work in the field. Therefore, rather than simply invoking what are perhaps inappropriate criteria for judging the magnitude of effects in a particular area, authors should strive to compare their findings with previous research.

18.4 Strengths and Limitations of Reviews

It is important to acknowledge some general strengths and limitations that characterize most reviews. Several of the major strengths of reviews have already been noted. Reviews can bring

readers up-to-date regarding findings in an area and offer conclusions and interpretations of the accumulated data that increase others' understanding and stimulate them to advance the field. Meta-analyses can assess a large body of literature that involves hundreds of studies and thus bring a perspective and focus to bear on issues that is extremely valuable to others. Surveys indicate that many researchers and practitioners read and depend on reviews for keeping them up-to-date in their respective fields (Cooper & Hedges, 1994).

However, a review's strengths depend on how well it has been executed and reported. Each of the components of a review discussed in this chapter is important, and the failure to accomplish one component effectively can undermine the worth of the entire enterprise. For example, accurate analyses and interpretations can be undermined if the relevant literature is not included or up-to-date. Poor writing can cloud the impact and value of a review. Therefore, each major component of a review is a critical determinant of its final worth.

In addition to limitations that involve a poorly conducted component of a review, as a matter of course, all reviewers depend on the information contained in original research reports. Although some reviewers do contact authors and ask for additional information regarding their studies (and this strategy is recommended so that potentially important studies do not have to be excluded) many authors do not comply with these requests and obtaining additional data from authors whose studies were conducted many years ago is most difficult. Therefore, many reviews must rely on the data contained in the original research report.

The APA Manual (American Psychological Association, 2001) and guidelines offered by many journals describe the essential information that should be included in any study. For example, if interventions are being evaluated, at a minimum, it is critical to describe clearly who did what, to whom, and what happened as a result. Unfortunately, reports often omit some of this information. Several authors have noted that the literatures they examined fail to describe the participants sufficiently, particularly in terms of ethnicity and socioeconomic status, but sometimes also in terms of age and gender; others do not describe who conducted the intervention and their experience and training level, exactly what were the major elements of the intervention, and whether it was implemented as planned. In other cases, there is insufficient information on the psychometric properties of the outcome measures, why the ns vary across outcomes, and when attrition occurs, if it differentially affected the intervention and control groups or if the sample of participants that was evaluated differed in any important way from those who began the study (Durlak, Celio, Pachan, & Schellinger, in press; Durlak & Wells, 1998; Hahn et al., 2007; Haney & Durlak, 1998; Tobler et al., 2000; Weisz, Jensen-Doss, & Hawley, 2006; Wilson et al., 2001). The extent to which data are missing on different variables affects the adequacy of any analyses, their resultant interpretations, and how final conclusions must be qualified due to missing data. It is still true that ".... there has never been a meta-analysis in which the author has noted that all the needed information was available in all the studies" (Durlak, 2003, p. 207).

18.4.1 Basic Competencies

Basic competencies related to literature reviews essentially involve the abilities to act as an informed and critical consumer of research, that is, the ability to read and judge a review's value in understanding current findings or developments in a particular field. Basic competencies related to literature reviews refer to knowing what constitutes a good literature review. This is why the previous sections focused on the major components of literature reviews and how

these components can be used to judge the quality of a particular review. Mastery of basic competencies is demonstrated by the ability to critically evaluate a literature review. In other words, first one needs to understand the major criteria that can be used to evaluate the scientific rigor of a literature. These criteria were presented in ❯ Table 18.1 and described earlier in this chapter. Mastery of basic competencies is demonstrated when one can read a review and appropriately evaluate its strengths and limitations in order to draw the appropriate conclusions and implications from the reviewed literature. Note that the conclusions a reader draws from a review might not correspond exactly to those presented by the author of the review. The reader might recognize certain limitations in the review not fully acknowledged by the author and therefore reach a different and more correct view of the literature than the original author. In fact, reaching a different conclusion might propel the reader to re-analyze the same literature hoping to improve on the new review and correct some of its problems. This is not shocking. Researchers can and do disagree about the contribution of new work. Science often advances when researchers offer their work to the scrutiny of others who might then be motivated to conduct better research.

18.4.2 Expert Competencies

Expert competencies relate to the production of new research: that is, the ability to conduct and report good literature reviews. In terms of meta-analysis, there are additional expert competencies that are relevant. Because of its quantitative nature, the use of meta-analysis can be greatly advanced by methodological and statistical research on different techniques and methods. For example, valuable contributions have been made by many authors who have developed methods to calculate effect sizes, made statistical adjustments based on the characteristics of research studies (i.e., weight studies by sample size), or clarify which and how effects should be used to assess a specific research literature. There are too many of these expert contributions to cite, but meta-analytic texts and handbooks often acknowledge these multiple contributions (e.g. Cooper & Hedges, 1994; Hunter & Schmidt, 2004; Lipsey & Wilson, 2001; Rosenthal, 2001) and advancements that continually appear in journals.

18.4.3 Acquiring Basic and Expert Competencies

Achieving the necessary basic and expert competencies related to literature reviewing is usually achieved in the same ways as other competencies: through knowledge and practice. It is important to read thoroughly about literature reviews to attain sufficient knowledge and understanding of the properties of a well-done review. The reader has already started this process by reading this chapter and its references will direct him or her to further literature regarding different aspects of reviewing. Then one practices the basic competencies and receives feedback from an expert in the area.

18.5 Basic Competencies

For basic competencies, a student's learning phase usually occurs informally. Students become attached to researchers who guide their students to influential work in a research area. Several

journals now use student reviewers who are mentored by researchers on the journal's editorial board. This is an excellent way to master basic competencies because this editorial mentoring process allows the student to complete a review on a submitted paper and then compare his or her comments about the paper to those prepared by the reviewing mentor. Because every research report contains a literature review, the student can learn through reviewing others' work, how to discern if the introduction to an article (which contains the literature review of previous work) has been prepared appropriately. Once again, ❯ Table 18.1 or the other sources cited in the table can be used as a guide to evaluate reviews. Students can also visit the websites of different journals that provide detailed guidance to prospective authors on how to prepare manuscripts for possible publication.

18.6 Expert Competencies

Once basic competencies are attained, the most reasonable way to become an expert is to practice, obtain feedback from an expert, and practice some more (i.e., incorporate the feedback in successive drafts of the review). This is essentially the process involved in most graduate programs regarding literature reviews (the first major chapter or section of a thesis or dissertation). A student proposes his or her thesis or dissertation, prepares a draft of a literature review, and receives comments on the draft from the thesis or dissertation chair (and occasionally from other committee members before the proposal and final defense). Some students become discouraged over the necessity of repeated drafts of their thesis or dissertations, but expert competencies are not achieved overnight and usually require continual practice and refinement. Even after multiple drafts have been prepared prior to the defense of the thesis or dissertation, other committee members usually offer additional comments to improve the final product. Boote and Beile (2005) and Maxwell (2006a, b) offer an interesting discussion about the strengths and limitations often encountered in dissertation reviews.

How can young scholars judge how much progress they are making in acquiring needed competencies? While students can learn about conducting and reporting reviews through helpful feedback from faculty mentors, an expert reviewer is able to execute a high-quality review independently. Ideally, during their graduate career, students should manifest a progression of reviewing skills. Their efforts at a review for their dissertation should be better than the review section of their thesis in the sense that the number of drafts their dissertation chair might suggest or the amount of revision that is required is less than for their thesis. Basically, their first efforts at the review section of their dissertation should be better than their last efforts at the review section of their thesis. However, students should not be discouraged by the amount of time and revision needed; even experienced and frequently-published scholars do multiple drafts of their papers. Nevertheless, young scholars will probably not conduct a review independently until after they receive their final degree and are functioning as professional psychologists.

18.7 Summary

This chapter has discussed the basic and expert competencies related to conducting and writing literature reviews, including meta-analyses. Many researchers and scholars depend on reviews

to bring them up-to-date on findings and implications of developments in their field. The three general goals of reviews are to: (1) critically evaluate and summarize a body of work (theory, research or practice), (2) reach some major conclusions about the literature, and (3) offer suggestions to advance the field.

The seven major components of literature reviews were described and several central questions that should be answered in judging the scientific value of the review were discussed. Basic competencies related to literature reviews involve the ability to act as an informed and critical consumer of research, that is, the ability to read and judge a review's value. Expert competencies relate to the production of research: that is, the ability to successfully conduct and write up a high-quality review. To demonstrate basic competencies, one needs to understand what characteristics make for a good review and be able to apply this knowledge when reading and evaluating reviews. Expert competencies are attained by a series of practice and feedback cycles in which one attempts a review, receives guidance from a knowledgeable expert on the different steps of the review, and uses that feedback to improve one's work.

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Professional Roles

19 Supervision

Robin L. Shallcross · W. Brad Johnson · Sarah Hope Lincoln

Abstract: As a central component in the training of graduate students in clinical, counseling and school psychology, the provision of clinical supervision has been undergoing an evolution and transformation in developing more explicit competencies. We review definitions of the terms of clinical supervision and competence, and define basic and expert levels of competence through a literature review and specific training examples of how to achieve these competency levels. The transformation this domain is experiencing can be summarized as a shift from learning how to supervise through observation or on the job training, to specific instruction and benchmarks of how to measure competence. This has implications of who is eligible to supervise by credentialing and licensing bodies, as well as capturing best practices in terms of providing excellent clinical, ethical and legal supervision.

19.1 Overview

Clinical supervision is a central component in the training of graduate students in clinical, counseling, and school psychology. In many respects, effective professional education in psychology hinges upon the supervisory process: "it provides the structure and framework for learning how to apply knowledge, theory, and clinical procedures to solve human problems" (Falender & Shafranske, 2004, p. 6). Good supervision allows trainees to develop competence as psychologists, as they progress across the continuum from novice to autonomously functioning professional (Holloway, 1992; Rosenbaum & Ronen, 1998). Clinical supervision achieves a number of salient purposes, including fostering supervisee's professional development, instilling and developing necessary skills and attitudes, ensuring that trainees who fail to develop sufficient skills and attitudes are not allowed to practice independently, monitoring and safeguarding client welfare, promoting ethical practice, and assisting trainees in the development of meta or higher-order competence as professional psychologists (Bernard & Goodyear, 2004; Falender & Shafranske, 2007; Vasquez, 1992; Watkins, 1997). Watkins summarized the importance of supervision this way:

> ▶ Psychotherapy supervision is important because, among other possibilities, it provides supervisees with feedback about their performance; offers them guidance about what to do in times of confusion and need; allows them the opportunity to get alternate views and perspectives about patient dynamics, interventions, and course of treatment; stimulates or enhances curiosity about patients and the treatment experience; contributes to the process of forming a therapist "identity" and serves as a "secure base" for supervisees, letting them know they are not alone in their learning about and performing psychotherapy. (Watkins, 1997, p. 3)

Numerous surveys in the professional psychology literature indicate that clinical supervision remains one of the most prevalent professional activities of clinical psychologists in both

academic and practice settings (Falender et al., 2004; Robiner & Schofield, 1990; Watkins, 1995). Most psychologists report that supervision is a key component of their professional identity and most of them provide some supervision during the average work week (Robiner & Schofield). Although supervision is central to the clinical psychologist's professional development and subsequent practice, very few training programs provide detailed training in supervision. As Watkins noted, "it seemingly is a process that is learned on the job or through some sort of osmosis; through witnessing countless hours of supervision – usually by several different supervisors or by undergoing one's own supervision" (p. 573). Further, the theoretical base for supervision has only recently begun to solidify (cf., Bernard & Goodyear, 2004; Falender & Shafranske, 2004); while the guidelines and standards for supervision remain elusive. For example, authors of the *Task Force on Supervision Guidelines* sponsored by the Association of State and Provincial Psychology Boards (ASPPB) expressed chagrin at the apparent failure of the psychology training system to standardize the process of supervision: "Given the critical role of supervision in the protection of the public and in the training and practice of psychologists, it is surprising that organized psychology, with few exceptions, has failed to establish a requirement for graduate level training in supervision" (ASPPB, 2003, p. 1). Although clinical supervision is a significant activity of practicing psychologists, less than 20% of supervisors have received formal training in supervision (Peak et al., 2002). To its credit, the profession of psychology has recently begun the process of carefully defining competence to supervise – most notably at the Competencies Conference held in Scottsdale, Arizona, in 2002 (Kaslow, 2004).

In this chapter, we distill and summarize the key elements of supervision competence. We begin with an overview of both supervision and competence and set the stage for the interface between these constructs. We will discuss some of the inherent challenges in providing training in clinical supervision at the predoctoral and prelicensure levels, given ethical and legal considerations. The model at the Pacific University's School of Professional Psychology (SPP), where the first author is part of the core faculty, will be used as an example of how a doctoral program surmounts these challenges. We will then offer suggestions for training of licensed psychologists in expert supervision competencies.

19.2 Introduction

19.2.1 Supervision

A review of the literature reveals numerous definitions of clinical supervision. We provide a sample of frequently cited definitions here, followed by a discussion of the most salient components of supervision.

▶ Supervision is an intervention provided by a more senior member of a profession to a more junior member or members of that same profession. This relationship is evaluative, extends over time, and has the simultaneous purposes of enhancing the professional functioning of the more junior person(s), monitoring the quality of professional services offered to the clients that she, he, or they see, and serving as gatekeeper for those who are to enter the particular profession. (Bernard & Goodyear, 2004, p. 8)

▶ It [supervision] involves observation, evaluation, feedback, the facilitation of supervisee self-assessment, and the acquisition of knowledge and skills by instruction, modeling, and mutual problem solving. In addition, by building on the recognition of the strengths and talents of the supervisee, supervision encourages self-efficacy. (Falender & Shafranske, 2004, p. 3)

▶ We define supervision as a working alliance between practitioners in which they aim to enhance clinical practice, fulfill the goals of the employing organization and meet ethical, professional, and best-practice standards of the organization and the profession, while providing personal support and encouragement in relation to the professional practice. (Kavanagh, Spence, Wilson, & Crow, 2002, p. 247)

These and other definitions of supervision share several key elements; we consider these as the salient features of clinical supervision. Below, we highlight the primary elements of supervision.

Supervision Is First and Foremost a Relationship. Supervision always occurs in a relational context (Watkins, 1997) and competent supervisors are attentive to the relational dynamics that shape the formation, course, and outcomes of supervision. In light of the relational foundation of supervision, it should come as no surprise that supervisees gravitate to supervisors with good interpersonal skills (e.g., empathy, respect, and genuineness) and who can effectively demonstrate support, empathy, and respect (Henderson, Cawyer, & Watkins, 1999). Effective supervisors see themselves as participants in the supervisory process rather than external observers of the therapy process (Whitman & Jacobs, 1998).

Supervision Extends Over Time. Supervisory relationships require some period of time – often several months – so that participants form a strong working alliance and begin the work of supervision (Bernard & Goodyear, 2004; Watkins, 1997). Many supervision relationships continue for years while others may be limited to several months because of the constraints of a training program.

Supervision Enhances Professional Functioning. The supervisory relationship exists for the express purpose of helping trainees to develop and hone the knowledge, attitudes, skills, and values essential for the competent practice of psychology (Bernard & Goodyear, 2004; Liese & Beck, 1997). Where formative supervision is crucial for instilling basic skills and competencies, ongoing supervision may minimize the likelihood that a psychologist's work will deviate from standards of practice or that a psychologist's knowledge and skills will become obsolete.

Supervision Helps to Ensure the Safety and Welfare of the Client. Supervisors are responsible for monitoring trainee's progress and performance as a way of protecting the public and preventing harm to individual clients (Vasquez, 1992). Monitoring the client care represents an essential ethical requirement for supervisors (American Psychological Association (APA), 2002); psychologists who supervise must balance attention between the trainee's development and vigilant concern for the best interests of all clients involved.

Supervisors Must Balance Developmental and Gatekeeping Roles. Supervision is a demanding role requiring psychologists to blend teaching, mentoring, and oversight roles with the perpetual obligation to evaluate trainees (Johnson, 2007; Watkins, 1997; Whitman & Jacobs, 1998). Like it or not, supervisors must constantly attend to quality control screening and ensure that trainees without sufficient skill or appropriate psychological fitness can be referred for remediation or even dismissal from the training program. Supervisors must maintain adequate objectivity and perspective so as to provide accurate formative and summative feedback to trainees.

Supervision Is Comprised of Multiple Supervisory Competencies. Although supervisory competency is a meta construct, competent supervisors are skilled at the delivery of numerous individual competencies (Falender & Shafranske, 2007; Johnson, 2007), many of which will be explored later in this chapter. Salient competencies include coaching and guidance in conducting therapy, bolstering a supervisee's professional identity, and communicating alternative views and perspectives (Watkins, 1997).

Supervision Is Distinct from Teaching, Psychotherapy, and Consultation. Bernard and Goodyear (2004) clearly articulate the contours between supervision and other roles commonly occupied by the psychologist. Like teachers, supervisors impart knowledge and engage in evaluation. Like psychotherapists, supervisors address supervisee's problematic thoughts, behaviors, and feelings and point out personal blind spots. Like consultants, supervisors attempt to help supervisees work more effectively as professionals. Yet, supervision is driven by the needs of the supervisee and the client (not a curriculum). Supervisors help supervisees to explore personal issues only if these relate to the efficacy of a client, and if supervision is more pervasive and enduring than consultation; supervision aims for broad development of the clinician, whereas consultation often addresses a specific deficit or a troubling case.

19.2.2 Competence

The term *competence* is now thoroughly intertwined with the literature on training and supervision in professional psychology (Kaslow et al., 2007). Both educational and training programs are expected to certify that their training "products" are competent to proceed to the next level of training or practice independently. Certainly, being competent is an ethical obligation for any member of the APA and psychologists licensed to practice psychology. For instance, Standard 2.01 of the Ethics Code, Boundaries of Competence, states that: "psychologists provide services, teach, and conduct research with populations and in areas only within the boundaries of their competence, based on their education, training, supervised experience, consultation, study, or professional experience" (APA, 2002, p. 1063).

Although psychologists have always demonstrated an interest in preparing competent professionals, ensuring competence is now framed as an ethical and professional obligation of psychologists engaged in training (Vasquez, 1992).

So, what is competence? Several authors lament about the fact that it is often easier to detect incompetence than it is to clearly delineate competence (Koocher & Keith-Spiegel, 1998), and that operational definitions of the competence construct are elusive at best (Ridley, Baker, & Hill, 2008). In an early effort to describe competence, Peterson and Bry (1980) conceptualized four dimensions of competence: professional responsibility, interpersonal warmth, intelligence, and experience. Pope and Brown (1996) reduced this model to two broad dimensions of intellectual and emotional competence.

Recently, definitions of competence in the field of professional psychology have become more nuanced and refined. We now provide examples of some of the more influential definitions of competence to date:

▶ [Competence is] the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and the community being served. (Epstein & Hundert, 2002, p. 226)

► Competence refers to an individual's capability and demonstrated ability to understand and do certain tasks in an appropriate and effective manner consistent with the expectations for a person qualified by education and training in a particular profession or specialty thereof. (Kaslow, 2004, p. 775).

► Competence is a state of sufficiency relative to the specific performance or training requirements within the given setting in which such abilities are exercised. (Falender & Shafranske, 2004, p. 5).

Most authors now appear to agree that competence refers to the psychologist's suitability for the profession as reflected in the acquisition and appropriate expression of specific knowledge, attitudes, and skills (Rubin et al., 2007). But, if supervisors are responsible for helping to instill competence in trainees (Vasquez, 1992), at what point does a trainee cross the threshold from incompetent to competent? Recently, Elman, Illfelder-Kaye, and Robiner (2005, p. 368) attempted to define this process, which they term as *professional development*: "Professional development is the process of acquiring, expanding, refining, and sustaining knowledge, proficiency, skill, and qualifications for competent professional functioning that result in professionalism."

On the Distinction Between Competence and Competencies. When conceptualizing competence, it is important to carefully distinguish between discrete professional *competencies* – specific attitudes, knowledge, and skills – and *competence*, an integrated deep structure that hinges on the psychologist's ability to coordinate the application of specific competencies in a specific context with a specific client (Ridley et al., 2008; Wood & Power, 1987). While competence implies a broad or meta capacity, it is dependent upon many discrete competencies, and far from an absolute construct, competence reflects sufficiency of a broad spectrum of personal and professional abilities, given a specific clinical/professional requirement (Falender & Shafranske, 2004, 2007). Competencies are always elements of competence and as such should be observable, measurable, containable, practical, and flexible (Kaslow, 2004). As clusters of integrated knowledge, skills, attitudes, and abilities, competencies should be positively correlated with overall competence and should be measurable against well-established standards (Kaslow; Rubin et al., 2007). Wood and Power (p. 25) distinguish competence and competencies this way:

► Competence depends on the dynamic interplay of the various competencies … By skillfully managing the process, professionals can adapt to individual differences, special cases, and unforeseen circumstances. Essentially, the purpose of the integrated deep structure [competence] is to coordinate and integrate the subordinate competencies and related skills in order to attain the predetermined outcomes.

19.2.3 Toward Supervision Competencies

What makes a clinical psychologist competent to a mentor? For decades, psychologists have assumed that an adequate clinician will also be an adequate supervisor (ASPPB, 2003; Falender & Shafranske, 2004, 2007). Assumptions, such as a license to practice psychology implies competence in the supervisor role or experience as a supervisee equates to subsequent competence as a supervisor, are destined to undermine the importance of supervisor preparation. Such assumptions are also incongruent with research findings showing that, in practice, many supervisors fail to competently tailor their interventions and approach to fit distinct supervisees in unique contexts with different clients (Shanfield, Mohl, Matthews, & Hetherly, 1992). Moreover,

there is evidence that a great deal of supervision and mentorship is marginal at best; there is often a very significant difference between minimally adequate and superior supervisors (Ragins, Cotton, & Miller, 2000). For all these reasons, it is imperative that the psychology profession moves to establish supervision as a core competence area within the discipline. This would imply that training programs and individual psychologists should hold an ethical obligation to insure that those who supervise are well trained, knowledgeable, and skilled in the practice of clinical supervision (Falender et al., 2004; Vasquez, 1992).

There is another reason for establishing supervision as a core competency area. Many supervision theorists have begun to emphasize the importance of common factors across various supervision models (Holloway, 1992; Ladany, Ellis, & Friedlander, 1999). For instance, Falender et al. (2004) propose five supra-ordinate factors that are essential to and infuse all elements of supervisory competence. These factors include: (1) recognition that acquiring supervision competence is a lifelong, cumulative, developmental process, (2) recognition that diversity in all its forms relates to every aspect of the supervision process and requires specific competence, (3) recognition that attention to legal and ethical issues is essential, (4) recognition that training is influenced by both professional and personal factors including values, beliefs, interpersonal biases, and conflicts, and (5) recognition of the necessity that both self- and peer assessment occur regularly throughout supervisory development.

Becoming a competent supervisor requires a significant transition from being a clinician (Falender & Shafranske, 2004). In order to determine a psychologist's competence to supervise, educators and evaluators must establish explicit and measurable standards of competence. Then, supervisors in training must be prepared to supervise through immersion in relevant training, experience, and self-assessment opportunities (Getz, 1999). A competency-based approach to preparing supervisors should be quite similar to the competency-based approaches to training clinicians. Falender and Shafranske (2007, p. 233) offer a clear definition of competency-based supervision which can easily be applied to the supervision of supervision: "Competency-based supervision is defined as an approach that explicitly identifies the knowledge, skills, and values that are assembled to form a clinical competency and develops learning strategies and evaluation procedures to meet criterion-referenced competence standards in keeping with evidence-based practices and requirements of the local clinical setting."

In the remainder of this chapter, we seek to further the agenda of establishing a competency-based model of supervision (Falender et al., 2004; Kaslow, 2004) by enumerating the core or basic competencies required for competent supervision in clinical psychology. Core competencies, when applied judiciously to specific supervisees, training contexts, and clinical circumstances will translate into competent supervisory performance. We then propose several higher-order competencies that are manifest in clinicians with specific expertise in clinical supervision.

19.3   Basic Competencies

As referenced in the "Introduction" section, the 2002 Competencies Conferences began the process of defining competence to supervise (Kaslow, 2004). Another step in the direction of further defining core competencies for predoctoral training was accomplished in the creation of The Competency Developmental Achievement Levels (DALs) of the National Council of Schools and Programs in Professional Psychology (NCSPP). They were approved by the membership on August 15, 2007, for inclusion in the NCSPP educational and training model in

	Begin Practicum	Begin Internship	Complete Doctoral Degree
	Assuring Client and Organizational Welfare		
K	1. Understanding of need for supervision 2. Understanding that diversity plays a role in organizations 3. Knowledge of one's limitations in functioning within an organization	1. Knowledge of one or more models of supervision 2. Basic knowledge of how personal and cultural values can influence supervision and management 3. Knowledge of organizational operations and the functions and limitations of roles therein	1. Knowledge of supervision practices and agency policies that enhance client and staff welfare 2. Knowledge of at least one model or theory and associated research and applications. 3. Sophisticated knowledge of how diversity issues and personal and cultural values influence supervision and management
S	1. Demonstration of awareness of self and others in relationship to leaders 2. Articulation of the importance of diversity in organizations 3. Demonstration of self-control and flexibility in new situations	1. Demonstration of ability to think critically and analytically about self and others as a manager, supervisor, and as supervisee 2. Attention to issues of diversity within the organization 3. Demonstration of ability to determine when seek extra supervision is needed	1. Ability to implement at least one model of supervision 2. Integration of knowledge of diversity issues into supervisory and management process 3. Management and maintenance of own self-care and promotes the wellness of others 4. Effective work with organizational structure, hierarchical relationship, and multidisciplinary colleagues
A	1. Appreciation for diversity 2. Enthusiasm for learning to function in clinical role 3. Valuation of leaders and supervisors as guides for effective service delivery 4. Active approach to learning about self in systems	1. Awareness of self and role in larger system 2. Interest in learning about organizational systems and how they influence individuals within them	1. Concern for, and commitment to, well-being of supervisees' clients 2. Tolerance of role expectancies and ambiguities 3. Valuation of the incorporation of diversity issues in supervisory and organizational decision making

	Begin Practicum	Begin Internship	Complete Doctoral Degree
	Training/Mentoring		
K	1. Knowledge of the purpose of training and the roles of apprentice and supervisee	1. Knowledge of multiple roles in the supervisory process 2. Knowledge of research evidence relevant to supervision and management of organizations 3. Knowledge of individual and cultural differences in supervision 4. Knowledge of, and developing, expertise in clinical areas in which one is supervising	1. Basic knowledge of monetary implications of a healthcare service delivery system 2. Knowledge of at least one business model that lends itself to healthcare delivery systems 3. Understanding of the importance of training and mentoring in the professional development of individuals and in the quality Enhancement of Organization
S	1. Ability to articulate basic roles of supervisor and supervisee 2. Effective function within organizational context 3. Active search for opportunities to learn from clinical placement and supervisor 4. Acceptance and incorporation of feedback from instructors and peers	1. Demonstration of ability to think critically and analytically 2. Ability to establish a supervisory alliance 3. Ability to utilize and integrate feedback with in the supervisory relationship 4. Ability to apply research knowledge to health-care systems and supervision 5. Ability to articulate primary mission and limits of setting	1. Ability to take an active part in developing or changing public policy 2. Ability to apply research findings to suggest changes in organizational policies and planning 3. Ability to perform and balance multiple roles in supervision, e.g., teaching, evaluation, mentoring, and modeling. 4. Ability to provide effective formative and summative feedback 5. Ability to integrate and evaluate feedback within the supervisory relationship. 6. Ability to assess learning needs of trainees.
A	1. Demonstration of interest in learning 2. Demonstration of interest in self-reflection 3. Openness to considering advocacy as a professional responsibility	1. Desire to supervise others 2. Valuation of professional collaboration within supervisory relationships 3. Valuation of flexibility 4. Commitment to lifelong learning and quality improvement 5. Interest in advocacy efforts	1. Willingness to take an active part in developing or changing public policy 2. Valuation of training and mentoring as professional activities

	Begin Practicum	Begin Internship	Complete Doctoral Degree
	Evaluation/Gatekeeping		
K	1. Understanding of purposes of evaluation 2. Understanding of responsibilities of agencies to larger bodies for accreditation and approval	1. Knowledge of basic formative and summative methods of evaluating clinical work of supervisees 2. Knowledge of how diversity and individual differences can influence approaches to evaluation 3. Knowledge of evaluation and feedback methods used in organizations	1. Knowledge of "best practices" in evaluation 2. Knowledge of one's own value system and the implications for management 3. Knowledge of evaluation of healthcare delivery systems
S	1. Appropriate response to supervisor and agency expectations 2. Demonstration of constructive use of formative feedback 3. Provision of basic constructive feedback to peers 4. Provision of needed information in a timely manner	1. Assessment of clinical strengths and areas needing improvement for self and others 2. Evaluation of how issues of diversity impact the supervision process 3. Ability to seek, utilize, provide, and integrate feedback 4. Prompt response to supervisory requests	1. Development of new evaluative skills as needed to serve the health-care organization 2. Oversight of program evaluations with the aid of a more experienced manager 3. Modeling of an accurate and reflective self-assessment process 4. Stimulation of self-reflection and self-evaluation in others
A	1. Demonstration of non-defensive openness to both formal and informal formative feedback 2. Valuation of self-reflection and an active approach to self-discovery 3. Demonstration of cooperative attitude regarding supervisor's priorities and agency's policies and expectations	1. Interest in increasing self-knowledge and experience 2. Valuation of, and respect for, the dignity and autonomy of others 3. Valuation of own skills 4. Openness to providing and receiving feedback from peers and supervisors	1. Valuation of role in organizational system and the beginning comfort with role of manager/supervisor 2. Investment in offering others feedback 3. Investment in receiving feedback from others
	Ethics		
K	1. Basic knowledge of ethics codes 2. Understanding of need for, and purpose	1. Knowledge of professional ethics, statutes, and rules and regulations	1. Knowledge of legal and ethical requirements, case law, and risk management

	Begin Practicum	Begin Internship	Complete Doctoral Degree
	of, accurate record-keeping 3. Knowledge of own limitations in experience and skills	regarding supervision 2. Knowledge of limits of one's supervisory and clinical skills 3. Knowledge of differences between therapy, consultation, supervision, and management roles	relevant to supervision 2. Knowledge of limitations of one's own supervisory competence
S	1. Ability to recognize legal and ethical issues in clinical and organizational contexts 2. Ability to function within appropriate professional boundaries in an organizational context 3. Beginning skill in accurate and useful record-keeping	1. Demonstration of appropriate professional assertiveness related to ethical issues 2. Search for appropriate information and consultation about ethical issues in supervision 3. Evaluation of and appropriate response to ethical and legal issues associated with supervision or organizational demands 4. Ability to comply with legal requirements 5. Ability to promptly complete necessary records with minimal supervision of methods	1. Integration of legal and ethical awareness in planning and implementation of programs 2. Ability to help supervisees and others recognize ethical dimensions of clinical decision making 3. Ability to develop record keeping methods that aid the organization's functioning 4. Ability to resolve supervisory role conflicts.
A	1. Demonstration of appreciation for and commitment to ethical practice 2. Recognition of the influence of value systems to ethical decision making 3. Appreciation for the need to function within the policies and procedures of an organization	1. Commitment to ethical practice as supervisee and supervisor 2. Appreciation for professional and business codes of conduct that influence service delivery	1. Commitment to ethical practice in all aspects of supervisory behavior 2. Encouragement of supervisees and organizations in the development of ethical practices
	Health Care Leadership and Advocacy		
K	1. Basic knowledge about healthcare systems	1. Understanding of impact of reimbursement on treatment provided	1. Knowledge of systemic implications of financial issues for healthcare service delivery

	Begin Practicum	Begin Internship	Complete Doctoral Degree
		and service delivery system 2. Knowledge of one or more models of leadership/management 3. Basic knowledge of monetary implications in service delivery	2. Knowledge of leadership and management roles 3. Basic knowledge of healthcare service delivery system options 4. Knowledge of at least one business model that lends itself to healthcare delivery systems
S			1. Ability to take an active part in developing or changing public policy 2. Ability to apply research findings to suggest changes in organizational policies and planning 3. Beginning ability to provide leadership in program planning and development
A	1. Openness to considering advocacy as a professional responsibility	1. Interest in advocacy efforts	1. Willingness to take an active part in developing or changing public policy

professional psychology. Each core competency is divided in grid format across three levels of clinical training: Begin Practicum, Begin Internship and Complete Doctoral Degree. Five domains of Management and Supervision were developed: (1) "assuring the well being of the client or organization," which was placed first to emphasize the primary duty of supervisor to client welfare; (2) "training and mentoring of supervisees and those being managed," which refers to the educative/facilitative dimensions of the supervisor/manager role; (3) "evaluation/gatekeeping," which refers to the responsibilities associated with formative and summative feedback to supervisees and communicating evaluative messages to external groups such as academic programs, administrative personnel, and licensing boards; (4) "ethics," functioning within the standards of the profession which cuts across all aspects of the competency, and (5) "health care leadership and advocacy," which refers to the roles and functions associated with managing programs or organizations as well as influencing organizational, governmental, and societal values and policies in the health care arena. Each domain is operationalized by specific tasks and outcomes across the dimensions of knowledge (K), skills (S), and attitudes (A).

Initially, graduate students in clinical, counseling, and school psychology, start out on the receiving end of supervision. At the Pacific University's SPP, students begin practicum training under the supervision of a licensed faculty person, after an initial year of academic instruction. The model followed is that students continue to receive supervision through 2 years of required practicum experience, optional clinical fieldwork for advanced students, internship, and then depending upon the state or province the individual will practice in after graduation, some form of postdoctoral supervised training. The ultimate goal representing independent and

autonomous functioning, represented by a license being granted, is that supervision is no longer *required*. However, in keeping with the first of the five supra-ordinate factors mentioned by Falender et al. (2004) that acquiring supervision competence is a lifelong, cumulative, developmental process, lifelong supervision or consultation is encouraged after licensure is achieved.

What is prudent to mention at this point is the inherent challenge in training students to become competent at basic levels of supervision skill. These are the ethical and legal issues of who is eligible to supervise. Clinical supervision by definition is a professional relationship between a licensed psychologist and a psychologist in training (practicum student, intern, resident) who is not able to provide services independently (Thomas, 2007). Supervisors have professional responsibilities to the supervisee and to the client. Supervision implies the supervisor's clinical responsibility for the work being supervised, i.e., client welfare. The supervisor is also legally responsible for the supervisee's actions.

Training in how to supervise faces some challenges nonexistent in training graduate psychology students in how to become administrators, consultants, teachers, and/or researchers. There are numerous examples, most likely familiar to readers of teaching assistantships, research assistants, assigning classroom or seminar projects of program consultation or organizational evaluation, that do not conflict with ethics or state regulations of the practice of professional psychology. However, in most jurisdictions, it would be unethical and illegal to "turn loose" a student–clinician trainee to independently supervise.

To address this issue, in the fourth year of training at SPP, students are required to take a two-semester Professional Roles class. In the first semester, they are introduced to the foundational seven competencies required for entry-level practice in professional psychology as promulgated by the NCSPP: relationship, assessment, intervention, diversity, research/evaluation, management/supervision, and consultation/education. This is in addition to other non-purely clinical domains of roles professional psychologists can engage in, i.e., administration, management, academic teaching, continuing education (CE) workshop provision, coaching, political action and advocacy, etc. In the second semester, Professional Roles is paired with a Supervision of Supervision (SOS) course, in which students are introduced to the multiple theories of supervision and are able to "supervise" master's students in our Counseling Psychology program. The class is taught by a licensed faculty and each doctoral student is paired with one to two master's students who are learning how to do assessment and therapy with each other as "pseudo-clients." Thus, no actual clients are involved in this training experience. Doctoral students receive feedback from the faculty person on their "supervision" of the master's students' role plays with each other. They also discuss assigned readings in their text and journal articles. Additionally, they are evaluated by their "supervisees" and asked to self-evaluate.

In our APA-approved internship at our in-house training clinic, the Psychological Service Center (PSC), interns are able to provide consultation to the practicum and clinical fieldwork students, and are under the supervision of their licensed faculty supervisor(s). They attend a weekly seminar in which theory and practice are discussed in a variety of domains they are being trained in. Thus, no student–clinician at any level of predoctoral training is independently supervising, but is offered gradual exposure to the skill sets required for basic competence in providing supervision.

Essentially, then, a "tandem" experience is occurring simultaneously for these predoctoral students: continuing to receive hopefully competent required supervision up to the point of completion of their internship, while learning how to provide competent supervision themselves. Such learning is a combination of role modeling, didactic instruction, exposure to research and literature in the theory and practice of supervision, and supervised practice in

providing supervision to less experienced students than themselves. The pre-internship students practice with less experienced students seeing pseudo-clients, while the interns are practicing with practicum students seeing real clients. However, in the latter instance, no intern acts independently of his or her own assigned supervisor in this consultative role.

Another challenge in the continuity of training psychologists to provide competent supervision is the requirement of several years of licensure prior to being eligible to supervise. The ASPPB Supervision Guidelines recommend that the supervisor has at least 3 years of post-licensure experience and has had training and/or experience in supervision (ASPPB, 2003, p. 3). This varies by each state's licensing board, but in Oregon, the minimum number of years of licensure required for predoctoral and postdoctoral supervision eligibility is 2 years. There is no requirement to provide documentation demonstrating proof of training in how to supervise. Ironically, this is in contrast to the Licensed Professional Counselor (LPC) Board in Oregon, which requires documentation of 30 clock hours of training in supervision prior to being eligible to supervise an eligible candidate toward the LPC credential. The majority of LPC's practicing in Oregon are master's prepared mental health therapists, as opposed to doctoral level practitioners.

In a personal communication from the former chair of the Oregon Board of Psychologist Examiners (OBPE) to the first author, the concern expressed for a requirement to document proof of formal training in how to supervise the licensed psychologists, is that it would further draw down the limited pool of psychologist eligible, willing, and available to supervise in Oregon. (S. Dale, June 20, 2007, personal communication). In the past several years, the OBPE has developed elective trainings, offered several times a year, in what is called Orientation to Psychologist Residency Supervision. Continuing education credits are available to those who attend.

To further illustrate SPP's model, the ten core and part-time faculty who are involved in direct supervision of service provision by the predoctoral student–clinicians in our in-house training clinics meet twice a month for a 1 hour meeting that is also entitled SOS. While some administrative issues regarding clinic policies and procedures are discussed, the meeting exists to support the supervisors in their complex and demanding roles as such.

A subset of this group attends a once a month Journal Club meeting, in which articles in the literature relevant to the various domains of professional psychology are read and discussed. Articles on the topic of supervision are frequently selected. In November 2008, the first author presented a 4 hour continuing education workshop to 45 core and part-time supervisors entitled Ethical Supervision: Best Practices, as another example of supporting supervisors to provide competent and ethical supervision.

In weaving back and forth between the theory and practice in achieving competence in supervision, the question still remains of basic competencies and how they are assessed. As the DALs have been so recently issued by the NCSPP, the structure of how to teach to supervise is still evolving, but does have a base in the literature.

Holloway, 1995, developed a *Systems Approach to Supervision* (SAS) as an example of a trend toward understanding how supervisors can be trained to do supervision rather than solely focusing on how supervision has been done. Her work addresses the contextual factors of the supervisor, the trainee, the setting in which supervision is provided and the cultural elements of each of these three factors. C. Edwards Watkins Jr. in his 1997 *Handbook of Psychotherapy Supervision* has chapters on how to provide supervision from the perspective of the following theoretical schools: Psychoanalysis, Psychodynamic Psychotherapies, Interpersonal, Dialectical Behavior Therapy, Rational Emotive Behavior Therapy, Cognitive Therapy, Client Centered, Gestalt, Experiential Model of On the Job Training, Developmental Perspective,

Integrative and Systemic Cognitive-Developmental Supervision. Bernard and Goodyear (2004) illustrate how most models of clinical supervision can be organized into four primary categories: (a) developmental models, (b) social role models, (c) psychotherapy-based models, and (d) integrative models. Aten, Strain, and Gillespie (2008, pp. 6–7) propose a transtheoretical model of supervision which includes ten supervisor processes of change: consciousness raising, dramatic relief, self-reevaluation, environmental reevaluation, self-liberation, stimulus control, counterconditioning, contingency management, social liberation, and helping relationships.

19.3.1 Case Example

To illustrate the SPP introduction to the basic competencies in clinical supervision, the first author provides the following "case example." Alice is a composite example of a fourth-year SPP student taking the required course of Professional Roles I in Fall Term of any given academic year. She is exposed to multiple competencies in a variety of domains professional psychologists can practice in, and this class emphasizes non-purely clinical roles to help students "diversify their vocational portfolio." In a vocational interests assessment survey conducted in the beginning of the course, about one third of the students indicate intention to become supervisors in their professional careers. In class, they are introduced to theories of clinical supervision, ethics involving supervision, and the DALs, through lecture and readings. They are assigned a "Shadow Knows" project, completed individually; and in group format, a Capstone Project is started that will be brought to completion in the second semester, or during the following Spring Term, in Professional Roles II. The Shadow Knows project involves shadowing a professional psychologist in the community at a non-purely clinical aspect of their job (supervision, consultation, coaching, administration, teaching, etc.) and interviewing them about job preparation and how they became interested in this aspect of the profession. AG would turn in a written report and give an oral presentation to the entire class, to permit vicarious learning.

The Capstone Project involves a small group of typically four students who contact an outside institution or agency, to explore more fully the nonclinical role and engage in active provision of that role. The contact and contract are made during Fall Term, and then the students complete the project in Spring Term. For those who choose clinical supervision, a typical activity is a review of the literature and a survey of student–clinician attitudes about positive and negative aspects of supervision, with a confidential report made to the supervisors of the results. Another example is the Capstone Group teaching to a class of Master's in Counseling Psychology students at another graduate school on ethical and competent supervision. The students self-evaluate their projects, give an oral presentation to the entire class on what they did and how they felt the project went. They are also evaluated by an independent, third party, typically a contact person at the agency or institution, who sends his or her evaluation to me to include in the overall grade.

As Professional Roles II (PR II) is a two-credit course, it is paired with a one-credit course of SOS, taught by a fellow faculty member. It is offered in both Spring and Summer Terms of any academic year, and the PR II students are paired with one to two Master's in Counseling Psychology students to "supervise" their role plays with each other as pseudo-clients in learning therapy and assessment techniques. The PR II students meet weekly with the faculty member in class format for lecture and readings discussion on clinical supervision, and weekly with their "supervisees" in group. The PR II students set training goals, review videotapes of the "sessions" their students have made of their role plays, and are evaluated by the master's students.

The texts we have used in the SOS class include Haynes, Corey, and Moulton's (2003) *Clinical supervision in the helping professions*: *A practical guide*, New York, Brooks/Cole-Thompson. In 2009, we are using Falender and Shafranske's (2004) *Clinical supervision: A competency-based approach*. Thus, AG would have the benefit of practicing basic competencies in clinical supervision prior to starting his or her internship.

19.4   Expert Competencies

The 2003 ASPPB Supervision Guidelines are meant to assist jurisdictions and supervisors by providing recommendations for: the supervision setting, supervisor qualifications, the duration and frequency of supervisory contact, the conduct of supervision, evaluation, regulation, and enforcement issues. Qualifications of supervisors are: Supervising psychologists shall be licensed or certified for the practice of psychology and must be aware of and abide by the ethical principles and state statutes pertaining to the practice of psychology in general and to supervision in particular. Supervisors have adequate training, knowledge, and skill to render competently any psychological service which their supervisees undertake. In instances when the needed service of a client is beyond the areas of expertise of the supervisor, supervision may be delegated to another psychologist whose competence in the delegated areas has been demonstrated by previous education, training, and experience. They shall not permit supervisees to engage in any psychological practice which they cannot perform competently themselves. The supervisor has the responsibility to interrupt or terminate the supervisee's activities whenever necessary to insure adequate training and the protection of the public. The supervisor has at least 3 years of post-licensure experience and has had training and/or experience in supervision (ASPPB, 2003, p. 3).

No specific training or experience requirements are indicated. While the first author has been continually supervising predoctoral and postdoctoral psychologists, as well as practitioners from other disciplines in the mental health field, in a variety of inpatient and outpatient clinical settings since 1987, she had no formal academic training in supervision during her years in graduate school from 1981 to 1985. Her skills and expertise have been predominantly acquired on the job, by attending professional development workshops, and through consultation from more senior mentors. In offering SPP's model and herself as an example of an expert supervisor in a setting conducive to supporting expertise, the reader is asked to accept this in the spirit of humility and as one possible model. The first author is very aware this model could be described as derivative of a prospective template based on a retrospective review of experience acquired while not necessarily following a prescriptive or formal training model at the time.

19.4.1 Supervisor Preparation

The following are recommendations to help make more standardized the definition of expert competencies in clinical supervision (Haynes, Corey, & Moulton, 2003):

- Formalized training in supervision which would include preparation to conduct clinical supervision. Components include self-assessment, ethical competence, knowledge of diversity and multicultural competence, and continuing professional development.
- Knowledge of formal contracts and agreements.

- Ability to initiate and maintain a positive supervisory relationship.
- Ability to assess both supervisees and all clients they will serve.
- Multiple modes of direct observation of the supervisee's work, i.e., video, DVD, one-way observation mirror, etc.
- Policies and procedures for practice.
- Knowledge of proper documentation methods.
- Specific feedback and evaluation plans.
- Good risk management practices.

Pragmatically, the first author, to the extent she is capable given the supervisory setting, does the following:

- Interviews the supervisee to determine mutually compatible interests.
- Signs supervision contract.
- Establishes training goals.
- Reviews evaluation form at the start of supervision to acquaint supervisees with the domains they will be evaluated in.
- At semester midpoint conducts an informal check in using the evaluation form completed "blind" meaning without prior discussion with supervisor and supervisee. Upon review, can discover if a "course correction" is needed in terms of how close or far apart perceptions of a student–clinician's work are.
- Formal evaluation at the end of each semester for both student–clinician and supervisor. Good supervision should mean there are no "surprises" at the end of the term.

The expertly competent supervisor has a supervision theoretical model to operate from, is familiar with the literature on supervision, checks malpractice coverage to ensure coverage of vicarious acts of supervisees, ideally has a support group of other supervisors that meets regularly, and attends periodic update professional development trainings on supervision that can also ideally earn continuing education credits.

19.4.2 Ethics

The first author teaches an Ethics course annually each Summer Term for first-year doctoral students prior to their entering practicum training in the Fall Term. She also teaches peers and colleagues in a continuing education workshop format on Ethical Supervision: Best Practices. A review of the 2002 Ethical Principles of Psychologists and Code of Conduct reveals that there is no separate section devoted exclusively to supervision. The pertinent codes extracted from the subsections are the following: 2.01 Boundaries of Competence; 2.03 Maintaining Competence; 2.05 Delegation of Work to Others; 3.05 Multiple Relationships; 3.08 Exploitative Relationships; 7.04 Student Disclosure of Personal Information; 7.06 Assessing Student and Supervisee Performance; and 7.07 Sexual Relationships with Students and Supervisees (APA, 2002, pp. 1060–1073). She has also volunteered as an orals examiner for the Oregon Board of Psychologist Examiners, which covers ethics and jurisprudence regulatory statutes for psychologists desiring licensure in Oregon. She also is an American Board of Professional Psychology examiner for clinical candidates. Again, this is another avenue to stay abreast of ethics developments in the field.

19.4.3 Diversity

The first author is fluent in Spanish and is the Director of the Latino Bilingual Track for the Pacific University's SPP. She developed a training model for fluent Spanish-speaking doctoral psychology students to participate in international study as well as to serve in clinics for practicum and internship training where Spanish-speaking populations are served. Additionally, she attends diversity training workshops offered annually by SPP for core and part-time faculty. Each syllabus, whether for a class or a supervision team, addresses diversity as follows: This course/supervision honors the diversity of individuals and organizations. Client services, readings, presentations, and discussions will be respectful to all people from the variety of personal ecologies. This includes race, class, nationality, regional identity, ethnicity, religion, age, sexual preference, gender, and abilities.

19.4.4 Structuring Supervision

To illustrate one model of conducting supervision, the first author currently supervises a team of four practicum students at one of the two in-house training clinics at the Pacific University's School of Professional Psychology, called the Psychological Service Center. It is located at the heart of downtown Portland, OR, and thus is in a metropolitan, urban area. There are 12 supervision teams: ten for providing therapy services and two for providing assessment services. In Spring Term of each academic year, about the month of February, each doctoral student ranks their choice of practicum placement from approximately 45 community sites, working in concert with the Director of Clinical Training (DCT). The goal at SPP is to keep as many first-year practicum students as possible in our two in-house training clinics, to provide close supervision and engage in a concerted attempt at gatekeeping, in addition to fostering student development. Most first-year practicum students are transitioning from the initial year of academic course work to their first clinical rotations. Some have come with past work experience in the mental health or chemical dependency field, and some have current, part-time positions working to supplement income while in graduate school. Some have had no related paid work experience in the field, but may have volunteered in their communities during their undergraduate years staffing a "hotline," or working in a crisis center. Some have been resident advisors in their college dormitories.

I supervise from a psychodynamic perspective and students who are assigned to my team as practicum or clinical fieldwork student–clinicians are aware of that orientation during the ranking time frame in the Spring. They are assigned to me by the PSC Director and the DCT.

If I am accepting a psychologist resident for postdoctoral supervision or someone from another discipline in the mental health field into my private practice, I will have a face-to-face interview to determine mutual compatibility and assess for ethical comportment. I have turned down requests for supervision from candidates only interested in a "rubber stamp" supervisor or for whom I did not feel confident about their integrity. If there is a mutual decision to enter into a supervisory relationship, we follow the stipulations and requirements as determined by the Oregon Board of Psychologist Examiners (OBPE) for a contractual arrangement, which requires approval by the Board prior to the start of the postdoctoral hours to count toward ultimate licensure. These forms are available for review at the OBPE Web site at www.obpe.org.

For an example of the contract I use when supervising or consulting with someone from a related field, please see Appendix A.

The clinical training year for practicum student–clinicians and interns extends from late August to the following year mid-August. The students have access electronically to the syllabus for each academic year, and know the dates we will be meeting, my expectations for supervision, and assigned readings for the year. The majority of the month of September is spent in group team meetings for 3 hours, as their caseloads are typically low, and I can spend time in orienting them to clinic policies and procedures (this is also done in weekly trainings by SPP administrators and staff), discuss psychodynamic theory, and get a feel for their knowledge and experience base, engage in team building exercises, and establish a baseline of knowledge I would like them to have at the beginning of our work together. We discuss their training goals and I orient them to the evaluation forms used at the PSC and quality assurance measures for charting. For examples of the Practicum Evaluation Form and the Intern Training Goals and Evaluation Form, please see Appendices B, C and D. I also have a handout of What to Bring to Supervision:

What to bring up in supervision; or, how to know which cases to ask about when you only have a limited time frame for supervision (in no particular order):

1. Any suicidal client, suicide ideation, suicide risk factors
2. Any homicidal client
3. Any time you hear threats to another person
4. Any time the client mentions violent fantasies, song lyrics, thoughts, etc.
5. Any time you hear about possible harm to a child (under age 18), including physical, sexual, or emotional abuse
6. Any time you hear about possible harm to an elderly person (65 or older)
7. Any time you hear about possible harm to a developmentally delayed adult
8. Any time you hear about possible harm to a mentally ill adult
9. Any unusual feelings about particular clients
10. Any times you told personal information
11. Any "out of office" contacts with clients, including telephone calls after work hours and any planned or unplanned meetings
12. Any physical contact with clients
13. Any times gifts are given or received
14. Any bartering or different fee arrangements with clients
15. Any time a client threatens a complaint or lawsuit
16. Any time the client brings up court or legal issues
17. Any time the client asks you to write a letter for him or her
18. Any time you receive a request for information about the client
19. Any time the client asks to see his or her file
20. Any time you employ an assessment device, even a behavioral checklist
21. Any time you stray from the agreed-upon treatment plan

We then move into a schedule of alternating weekly 3 hour group supervision meetings with 45 min individual supervision times, to allow a balance between vicarious learning in the group and more privacy for specific feedback in individual meeting times. We establish if there is an urgent client situation, i.e., suicidal, homicidal, abusive to attend to as a priority. Next, we move on to the other clients in each student's caseload. The student–clinician presents a client and

comes with consultation questions formulated, has a portion of a DVD of the actual session to show, and then a discussion ensues. The initial emphasis is on helping students to establish a therapeutic working alliance, recognize positive and negative transferences, clarify diagnoses, establish appropriate treatment plans to match the client's presenting concerns and learn to recognize various levels of defensive functioning and to make conducive interpretations. An overarching goal is to establish a safe and trusting environment in which the students can feel comfortable sharing their mistakes as well as their superb accomplishments. A favorite quote from a previous supervisee is that supervision from me would often challenge her in ways she could not always understand at the time, but put her on her "growing edge."

19.4.5 Evaluations

Evaluations, both informal and formal, are always done in individual meetings for confidentiality and Family Educational Rights and Privacy Act (FERPA) reasons. FERPA is a federal US law to protect students' privacy and confidentiality. Midpoint through each semester I do an informal evaluation with each student–clinician. I have them complete the evaluation form independently of me, and I also fill one out for them. We then compare our ratings to see how closely they match. If there are significant discrepancies in our perceptions of their performance in each of the domains evaluated, this offers the opportunity for a "course correction." At the end of each term, a formal evaluation is conducted, I sign off on their accumulated hours, and this becomes a part of their SPP student evaluation file. At the end of each term, they are offered the opportunity to complete an evaluation of me anonymously through Survey Monkey electronically, and the aggregate ratings are sent to me by the DCT's administrative assistant for my review. These reviews are included in each faculty supervisor's personnel file for inclusion in the annual performance appraisal.

19.4.6 Case Example

The following will illustrate the first author's clinical supervision of a team of Practicum I or Practicum II students in one of SPP's in-house training clinics. In August, I send a welcome and introductory e-mail to the student–clinicians assigned to me. I include a copy of the syllabus, with assigned readings and dates we will be meeting for Fall Term. They sign their contracts during the first week of orientation, which are returned to the DCT. The orientation is being conducted by a variety of faculty and staff to assist the student–clinicians in "learning the ropes" of agency policies and procedures. In our first group meeting as a team, I have each of them complete a training goals survey and discuss what their experiences to date have been in either volunteer or paid work positions. I ask them at this point in their training, what they envision doing with their degree, and in what settings they would like to work. As the majority of my fellow faculty teach and practice using Cognitive-Behavioral Theories, I know that as a psychodynamic practitioner and supervisor I will have some basic teaching tasks during the first month of our supervision meetings to bring the team to a "baseline" level of understanding various terminologies and techniques. Primarily, I am introducing or reviewing the concepts of conducting good interview assessments, accurate diagnosis, building rapport, establishing therapeutic working alliances with clients, transference, countertransference,

case conceptualization, and formulating treatment plans. I give them copies of the evaluation forms used by the PSC, and how I will work with those tools, both for midterm informal (mutual check in) evaluation and formal end-of-the-term evaluation. I explain to them the difference in formative and summative evaluation, and also gently remind them I have a gate-keeping responsibility to the profession and consumers. One helpful way to introduce this delicate concept is to remind those of them who have participated in the admissions committee process that they have actually been involved, in part, in giving input to who is admitted versus rejected from the SPP program.

I very clearly explain my expectations of how they are to come prepared to use supervision time, that I am ultimately responsible for their actions and the safety and well-being of their clients, and that they are practicing under my license. They are given a copy of the previously described What To Bring To Supervision. I have found in teaching ethics that the model of Berry and Sam (1997) of acculturation, originally to ethical identity, is usefully applied to acquire a professional identity. The idea of "culture shedding" is a helpful concept in understanding and shaping student–clinicians. New graduate students and student–clinicians vary widely in their knowledge and understanding of professional comportment, and can undergo a period of confusion and resistance as they adapt to the values, traditions, and behaviors of an unfamiliar profession. Where I see this most concretely occur is in the areas of jurisprudence and understanding how and why psychologists have discretion as abuse reporters in Oregon in privileged and confidential settings. If students worked in a setting prior to training with us, or are currently working in a setting where they are considered mandated reporters, there is a shedding of one role to adopt another. I also explain to them how I will review their written work, to complete it in a timely fashion, for client files and quality assurance reviews.

And so the training year begins, and I am looking for the qualities of openness to feedback, receptivity and eagerness to learn new ideas and try out techniques, compassion and empathy, willingness to discuss mistakes as well as accomplishments, and support each other as team members. The student–clinicians attend twice the monthly trainings by a variety of faculty and community professionals, attend once the monthly Grand Rounds, and work with the interns as consultants to cases. We have three semesters during the training year, so three formal evaluations are conducted at the end of each term.

During the training year, the first Term is typically helping students building caseloads, with their first clients typically transfer clients from previous student clinicians. Thus, working with attachment-loss-and reattachment issues conceptually and technically to retain clients is a theme. Making students feel comfortable and knowledgeable with clinic policies and procedures, and less performance anxious, is also an initial training goal. The second Term is about consolidating theoretical knowledge and understanding and creating useful treatment plans that connect theory to techniques in accomplishing clients' treatment goals. By the third Term, preparing students for transfer and termination of clients, as well as their own departures from the clinic, is a predominant theme. Many client terminations are determined by the student–clinician's training goals as opposed to the clients finishing treatment on their own. So, sensitivity to perceptions of rejection and abandonment on the part of some clients is thoroughly discussed.

Throughout the year, I will be participating in SOS meetings with fellow supervising faculty, attending CE workshops, and staying abreast of the literature. This description and case example has emphasized working with beginning student–clinicians in their first year of Practicum training. If I am supervising a postdoctoral fellowship, I follow a developmental model of less teaching, didactics, and direct instruction through role-modeling to help prepare

the more advanced supervisee for a greater level of independence and autonomy granted through licensure.

19.5   Summary

Our overview provides an acknowledgement of the seminal and continuing importance of clinical supervision to the field of professional psychology. In recognition that the field is moving in the direction of establishing competencies in the domains reflected in this handbook, this chapter has elucidated an understanding of a distinction between competence and competencies. As the field moves from a belief and practice that learning how to supervise was based on an apparent apprenticeship model of observation and "osmosis," benchmarks are now being established to help guide training programs toward a more standardized process of teaching how to supervise. One graduate school's model was discussed as an example of incorporating the DALs into required coursework and experiential training in how to conduct clinical supervision.

In discussing basic and expert competencies, it is apparent that there are inherent challenges in reaching consensus given the multiplicity of theoretical approaches, settings and populations supervision is provide, as well as the pragmatic challenges of ethical and legal prohibitions against nonlicensed supervision.

A review of the DALs for predoctoral training and recommendations for post-licensure-continued acquisition and enhancement of clinical supervision knowledge and skill provides examples of support and ongoing development of the supervisor. Professional development in the domain of clinical supervision is truly an ongoing, lifelong developmental curve. The ethically and legally compliant supervisor will find that the bulk of preparation and experience will continue to occur post licensure.

Appendix A

Robin L. Shallcross
Diplomate in Clinical Psychology, Portland, Oregon, USA

Supervision/Consultation Contract

Introduction

Welcome to my practice. I look forward to our work together in either a supervisory or consulting relationship. There is a distinction between these two terms; we will establish which type of relationship we have entered to be clear about the nature of our work together. If I am supervising your work, you are practicing under my license, and we share the responsibility for the work you do. If I am your consultant, I act in the capacity of an advisor only. You are not compelled to follow my suggestions and I am not legally held responsible for your work. The professional decisions you make as an advisee are solely your own.

I have been a licensed psychologist in Oregon since 1992 and earned my Diplomate in Clinical Psychology from the American Board of Professional Psychology in 1990. I have been supervising and consulting with a variety of mental health professionals since 1987. My theoretical orientation is psychodynamic and my professional experience includes therapy work and assessment in inpatient and outpatient settings: individual, couples and group work, public speaking engagements, workshop presentations, administrative and program development in academic settings. I work primarily with an adult populaion and do not consider myself trained to work with children or adolescents under 16. I am also not qualified to conduct neuropsychological testing, other than brief screening instruments.

Confidentiality

Our supervision/consultant relationship and the work that takes place are considered confidential with the following exceptions:

- If you work at an agency we will need to discuss communications with your supervisor at the agency. We will need to establish frequency and type of contact between myself and your supervisor, responsibilities of your agency, me and you for communication about professional activities and evaluations. All clients need to know you are in supervision (it is your choice whether to advise clients of retaining a consultant) and that they will be discussed confidentially. Please have clients sign permission to audio/video tape sessions after discussion with them and before you tape. This should be considered part of informed consent.

Initials_____

- If you are working towards licensure or are presently licensed you are expected to abide by the Code of Ethics of your professional board. If I believe you are endangering clients by unethical practices, I will need to report those practices to the appropriate board.

- If you are a student, evaluations will be shared with your school. We will also need to follow their requirements for standards and practice.

Expectations for Our Work Together

We will discuss and set goals for professional growth in supervision/consultation on an ongoing basis. You are expected to prepare for each session by thinking through these goals, your cases and deciding what case presentation and questions would be most pertinent for us to focus on.

We will have formal written evaluations every _____. These will be shared with _____. Your evaluation will be based upon the goals we are meeting and the ongoing feedback in each session. I expect you to evaluate how supervision and or consultation is meeting your needs and what I can do to change to better help you.

We will discuss suicide assessment, risks and procedures and duty to warn information to prepare you for a suicidal or violent client. This information is to assist your clients and support your professional knowledge and independent functioning if an emergency arises. You will be asked to sign that we reviewed this information.

You are expected to follow all ethical rules for informed consent and confidentiality for clients. We will review the forms you use for release of information with other professionals and to discuss when you have contacts with professionals about clients.

You are expected to maintain clear professional boundaries with clients. Throughout supervision/consultation we will focus on ethics and deepen your understanding of ethical practice. We will discuss professional boundaries and possibilities of dual relationships. This serves as notice I consider sexual relationships harmful to clients, unethical and prohibitive.

Feelings as they arise with and about clients are important information relevant to the therapeutic relationship. I expect these feelings to be discussed in supervision/consultation.

We will need to discuss all "out of office" contacts with clients. This includes telephone calls to your home by a client, telephone calls after work hours to or from your client, and any planned or unplanned meetings (i.e., at the grocery, social events, movies, school or professional functions, etc.)

Initials_____

We need to discuss any physical contact with your client, even if you consider this touching therapeutic.

We need to discuss any bartering arrangement you may consider with a client instead of a set fee. In addition, we need to discuss any acceptance or giving of gifts.

Information About You

Have you ever had a complaint of any kind filed against you by anyone, including but not limited to clients, colleagues or the lay public? This complaint may have been to a supervisor, administrator, licensing board or professional organization.

_____yes _____no

If yes, what was the outcome of the complaint? Were you disciplined? Please elaborate using an extra sheet if necessary.

_____
_____
_____
_____
_____
_____

Do you have malpractice insurance? Malpractice insurance is a requirement for supervision or consultation and coverage must be maintained throughout our work together. Please provide a copy of your current coverage including the name of the carrier, limits and dates of coverage. In the event you change insurers, have your insurance cancelled and/or have a claim made against your professional insurance, you must disclose these changes or events immediately. If our agreement lasts over time, I may request you provide me with an update of your professional liability coverage.

We have agreed to meet _____ for the dates beginning _____ through _____. My fee for each one hour session is _____. Please pay me at the time of our appointment, unless we make other arrangements.

This supervision/consultation relationship may be terminated by either party at any time. In such an event, we will document the termination agreement in writing.

I have read all the above exceptions to confidentiality and expectations. I have discussed this contract consisting of four pages and agree with all of its provisions. A copy of this contract has been provided to me.

I have read and understand the terms of this agreement. I am retaining Robin L. Shallcross, Ph.D., ABPP as a supervisor/consultant.

Initials_____

Supervisee_____ Date _____
Printed Name_____
Consultant_____ Date _____
Printed Name_____
_____ Date _____
Robin L. Shallcross, Ph.D., ABPP
Diplomate in Clinical Psychology

Appendix B

SCHOOL OF PROFESSIONAL PSYCHOLOGY
Clinical Psychology Program, Pacific University, Portland, Oregon, USA

Student Name	**Grade Recommended by Supervisor (P/F)**
Semester (Spring, Summer, Fall) & Year	Supervisor Name
Training Level	Site

SITE'S EVALUATION OF TRAINEE

We recommend that evaluation be done collaboratively with the trainee by the primary supervisor. This form is due to the Clinical Training office by the last day of classes in the term.

INSTRUCTIONS: Using the scale below, give an overall rating for each area of competency and add any explanatory comments regarding strengths or concerns. **Rate students relative to other students at the same level of training.**

6	Exceptional
5	Excellent
4	Very Good
3	Good
2	Fair
1	Poor
0	Unacceptable

RELATIONSHIP: INTERPERSONAL SKILLS

- Remains pleasant and accessible towards others
- Maintains professional boundaries with others
- Aware of impact of own behavior on others
- Communicates understanding of other's positions, concerns
- Adapts behavior appropriately based on feedback
- Articulates points clearly to others
- Maintains positive, enthusiastic attitude
- Interacts with others in a professional and courteous fashion
- Tolerates ambiguity/uncertainty
- Presents a professional image (dress, grooming, demeanor)
- Is comfortable in supervisory role
- Provides helpful, accurate guidance
- Provides balanced, sensitive feedback
- Seeks supervision to augment supervision/consultation of others

Interpersonal Skills Rating	
Comments:	

SUPERVISION (RECEIVE) SKILLS

- Reviews/prepares for supervision
- Identifies and works on supervision objectives
- Hears and implements feedback
- Communicates clearly in supervision
- Is aware of personal biases/impact on clients and supervisors
- Is developing professional counselor identity

Supervision Rating	
Comments:	

CASE MANAGEMENT SKILLS

• Maintains chart documentation in timely, complete fashion	• Knows when s/he needs consultation
• Writes useful, intake, transfer, termination reports	• Consults when needed with other agencies with documentation
• Keeps updated, useful, behaviorally specific treatment plans	• Manages time & caseload sensitively & effectively
• Maintains accurate, complete case notes	• Follows agency rules/procedures
• Refers to treatment notes when writing case notes	• Completes paperwork on time

Case Management Rating	
Comments:	

INTERVENTION: THERAPY SKILLS

- Establishes warm, caring relationship quickly
- Is sensitive to how their behavior may affect client
- Is empathetic and accepts client's feelings
- Confronts difficult issues sensitively
- Is able to respond effectively in a crisis situation
- Formulates and implements behaviorally specific TX goals
- Makes useful conceptualizations and TX plans
- Implements TX plan in session
- Monitors clients progress
- Uses data collected to guide treatment decisions

Therapy Skills Rating	
Comments:	

- Understands personal limits and competencies
- Makes appropriate referrals
- Maintains confidentiality, secures appropriate releases

- Articulates and resolves ethical dilemmas
- Represents self correctly
- Avoids dual relationships
- Understands and uses informed consent

ETHICS SKILLS

Ethical Values Rating	
Comments:	

- Is aware of personal biases and worldview
- Brings up issues of diversity in supervision
- Shows sensitivity to cultural values
- Incorporates issues of diversity into conceptualization & treatment plan

- Sensitively handles issues of diversity clinically & proffesionally
- Incorporates professional diversity guidelines into work
- Operates from an appropriate frame of multicultural competency
- Attends to client's cultural context in assessment & treatment

DIVERSITY SKILLS

Diversity Rating	
Comments:	

CONSULTATION/EDUCATION SKILLS

- Elicits appropriate consultation question
- Clearly establishes who the client is
- Develops consultation contract
- Completes consultation as designed (or revised)
- Prepares appropriate report (if applicable)
- Maintains clarity about consultation/education role

Consultation/Education Skills Rating
Comments:

MANAGEMENT/SUPERVISION (GIVE) SKILLS

- Is comfortable with role of appropriate authority
- Communicates appropriately with other supervisors
- Offers useful & helpful feedback

Management/Supervision Skills Rating
Comments:

RESEARCH: LOCAL CLINICAL SCIENTIST SKILLS

- Seeks out appropriate literature to aid in case conceptualization & treatment planning (both internal & external validity)
- Discusses the literature in supervision
- Incorporates empirical knowledge into treatment planning
- Conducts treatment according to plan (unless appropriate to revise)
- Uses outcome measurement therapeutically
- Revises treatment plan according to outcome measurement

Research/LCS Skills Rating
Comments:

ASSESSMENT SKILLS CHECKLIST

- Elicits appropriate referral question
- Selects and uses outcome measures
- Incorporates outcome measures into treatment plan
- Establishes appropriate baseline
- Conducts effective initial interviews

- Produces readable reports in a timely fashion
- Integrates findings into useful conceptualization
- Administers/scores/interprets competently (intellectual, objective, projective, outcome)
- Other (specify)

Assessment Skills Rating	
Comments:	

In general, what do you believe the student has accomplished this term?			
What are areas for improvement for next term or at the next site?			
Printed Name and Signature of Student	Date	Printed Name and Signature of Supervisor	Date

Appendix C

PSYCHOLOGICAL SERVICE CENTER
Pacific University, Portland, Oregon, USA

Intern		Date
Supervisor	Rotation	
Semester (Spring, Summer, Fall)		

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TRAINING OBJECTIVES FOR INTERN

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15 domains of intern competence are listed below along with examples of specific items in each domain.

- At the beginning of each term, the intern and supervisor **collaboratively** develop a list of personal goals in each category.
- Not every area in each domain need be addressed, though each intern should have **three goals** within each category.
- Goals should be **behaviorally specific and relevant** to areas that need improvement. Examples of ways to make goals measurable follow. This is not a comprehensive list:

  - KNOWLEDGE: Test of knowledge in new area
  - INTENSITY: Rating of comfort or skill in acquiring skill in a new area (e.g. rate comfort and skill with functional analysis from 0–10)
  - FREQUENCY: State number of times you plan to accomplish a particular goal behavior (e.g. plan to read 3 articles about treating panic; or plan to complete notes within 24 hours 90% of the time)
  - DURATION: State planned duration of new behavior (e.g. plan to review the referral notebook for 10 min daily)

- Goals will be reviewed between supervisor and intern at the end of the term
- Results of this review will be considered in the supervisor's ratings of the intern at the end of the term.

<div align="center">

ASSESSMENT

</div>

- Successfully administers assessments
- Correctly scores assessments
- Makes clinically relevant and accurate interpretations

- Writes concise, well-organized, thorough reports
- Provides clinically sensitive, appropriate feedback to clients

GOAL #1	
GOAL #2	
GOAL #3	

INTERVIEWING

- Conducts accurate, clinically sensitive intake interviews
- Balances information gathering with rapport building
- Identifies and clarifies presenting concerns
- Assesses history, impact, and current level of functioning
- Conducts mental status evaluations when appropriate
- Gathers diagnostic information efficiently and accurately
- Makes accurate diagnoses based on intake interview
- Selects, uses, scores, and interprets screening instruments
- Completes interview within the specified time-frame
- Completes intake reports in a timely manner

GOAL #1
GOAL #2
GOAL #3

CASE CONCEPTUALIZATION

- Develops cohesive case conceptualizations
- Conceptualizes cases according to a theoretical orientation
- Considers and appropriately addresses cultural issues in conceptualization
- Identifies causal, maintenance, and intervention factors
- Considers research in case conceptualization
- Identifies client strengths
- Writes well-organized, thorough comprehensive case conceptualization reports
- Uses case conceptualization to guide treatment

GOAL #1
GOAL #2
GOAL #3

TREATMENT PLANNING

- Collaborates with client in development of treatment plan
- Develops treatment plans that are consistent with conceptualization
- Prioritizes client concerns according to client wishes and feasibility
- Develops specific, measurable treatment goals
- Identifies interventions for each goal
- Considers research in selection of interventions
- Selects clinically appropriate outcome measurements for each goal

GOAL #1
GOAL #2
GOAL #3

INDIVIDUAL ADULT CLIENT INTERVENTIONS

- Competently treats depression, anxiety, and relationship problems
- Knows and applies empirically supported treatment interventions with adults
- Effectively motivates clients

- Follows treatment plan and works directly on treatment goals
- Effectively identifies and intervenes with in-session clinically relevant behavior
- Quickly builds a caring, warm therapeutic relationship

GOAL #1
GOAL #2
GOAL #3

GROUP INTERVENTION

- Competently treats adult concerns in a group setting
- Knows and applies knowledge of group stages and roles.
- Effectively motivates clients in groups

- Follows treatment plan and works directly on treatment goals
- Effectively identifies & intervenes with group members' clinically relevant behavior
- Quickly builds a cohesive group

GOAL #1
GOAL #2
GOAL #3

CHILD AND FAMILY INTERVENTIONS

- Competently treats both internalizing and externalizing behaviors
- Applies empirically supported interventions with children & parents
- Effectively motivates children and parents

- Follows treatment plan and works directly on treatment goals
- Effectively identifies & intervenes with in-session behavior
- Quickly builds a relationship with children and parents

GOAL #1
GOAL #2
GOAL #3

CLIENT PROGRESS

- Identifies appropriate outcome assessment
- Incorporates outcome assessment into the treatment plan
- Documents outcome assessments into the chart notes

- Uses outcome assessment to inform treatment
- Regularly administers outcome assessment
- Sensitively shares outcome assessment results with client

GOAL #1
GOAL #2
GOAL #3

THERAPEUTIC ALLIANCE

- Quickly develops therapeutic rapport
- Successfully repairs ruptures to the alliance
- Attends to and appropriately uses the interpersonal process
- Avoids premature client-initiated therapy termination
- Communicates empathy, respect, and genuineness
- Appears competent and relaxed

GOAL #1
GOAL #2
GOAL #3

SUPERVISION/CONSULTATION

- Is comfortable in supervisory role
- Provides helpful, accurate guidance
- Provides balanced, sensitive feedback
- Seeks supervision to augment supervision/consultation of others

GOAL #1
GOAL #2
GOAL #3

USE OF SUPERVISION/CONSULTATION

- Reviews/prepares for supervision
- Identifies and works on supervision objectives
- Open to feedback
- Brings up pertinent issues in supervision
- Communicates clearly in supervision
- Is aware of personal biases/impact on clients and supervisors
- Implements feedback

GOAL #1
GOAL #2
GOAL #3

PRACTITIONER-SCHOLAR MODEL

- Knows and uses relevant research to guide treatment
- Independently seeks clinically relevant research

GOAL #1
GOAL #2
GOAL #3

PRACTICE IN DIVERSE CULTURAL COMMUNITIES

- Integrating knowledge of diverse populations in case conceptualization & treatment planning
- Awareness of personal biases
- Attends to culturally relevant issues in session

- Adjusts psychotherapy methods to culture specific norms and therapy needs
- Addresses cultural issues in supervision
- Works clinically with ethnic minority populations

GOAL #1
GOAL #2
GOAL #3

ETHICAL AWARENESS AND SKILLS

- Understands personal limits and competencies
- Makes appropriate referrals
- Shows sensitivity to cultural values
- Maintains confidentiality, secures appropriate releases

- Articulates and resolves ethical dilemmas
- Represents self correctly
- Avoids dual relationships
- Understands and uses informed consent

GOAL #1
GOAL #2
GOAL #3

SELF AWARENESS

- Is aware of emotional reactions to clients
- Understands the impact of his/her behavior on others

- Knows biases and prejudices
- Open to self-exploration and feedback

GOAL #1			
GOAL #2			
GOAL #3			
Printed Name and Signature of Intern	Date	Printed Name and Signature of Supervisor	Date

Appendix D

SUPERVISOR EVALUATION OF INTERN Psychological Services Center, Pacific University					
Intern Name:		Supervisor:	Rotation:		Date:
HOURS	Mid Fall	Fall (desired)	Spring (desired)	Summer (desired)	Cum Total
2004–05		75/85/95	80/95/105	85/100/120	240/280/320
		QAR SCORE:	QAR SCORE:	QAR SCORE:	QAR SCORE:
		PROF. REMINDERS:	PROF. REMINDERS:	PROF. REMINDERS:	PROF. REMINDERS:
		PROF. COMMEND:	PROF. COMMEND:	PROF. COMMEND:	PROF. COMMEND:
		QAR SCORE:	QAR SCORE:	QAR SCORE:	QAR SCORE:

Please circle the level that best reflects this intern's skill level for each item. *Items should be addressed by all rotations. If item does not apply, circle "N/A to this rotation"

Assessment	N/A to this rotation	Ready for Postdoctoral Practice	Needs Occasional Supervision	Needs Regular Supervision	Needs Remedial Work
The intern promptly and proficiently administers commonly used tests in his/her area of practice, autonomously choosing the tests to be administered appropriately. All interns demonstrate competency in administering intelligence tests and MMPI-2.		Proficiently administers all tests. Completes all testing efficiently. Chooses appropriate tests to answer referral question.	Occasional input needed regarding fine points of test administration. Occasionally needs reassurance that selected tests are appropriate.	Needs continued supervision on frequently administered tests. Needs occasional consultation regarding appropriate tests to administer.	Test administration is irregular, slow. Often needs to recall patient to further testing sessions due to poor choice of tests administered.
The intern autonomously interprets the results of psychological tests used in his/her area of practice. All interns demonstrate competency in interpreting intelligence tests and MMPI-2.		Skillfully and efficiently interprets tests autonomously. Makes independent diagnostic formulations on a variety of syndromes with confidence. Accurately interprets and	Demonstrates knowledge of scoring methods, reaches appropriate conclusions with some support from supervision.	Completes assessments on typical patients with some supervisory input, occasionally uncertain how to handle difficult	Significant deficits in understanding of psychological testing, over-reliance on computer interpretation packages for interpretation.

Assessment	N/A to this rotation	Ready for Postdoctoral Practice	Needs Occasional Supervision	Needs Regular Supervision	Needs Remedial Work
		integrates results prior to supervision session.		patients or unusual findings. Understands basic use of tests, may occasionally reach inaccurate conclusions or take computer interpretation packages too literally.	Repeatedly omits significant issues from assessments, reaches inaccurate or insupportable conclusions.
The intern writes a well-organized psychological report, answering the referral question clearly and providing the referral source with specific recommendations for patient care.		Report is clear and thorough, follows a coherent outline, is an effective summary of major relevant issues. Relevant test results are woven into the report as supportive evidence. Recommendations are related to referral questions.	Report covers essential points without serious error, may need polish in cohesiveness and organization. Readily completes assessments with minimal supervisory input, makes useful and relevant recommendations.	Intern uses supervision effectively for assistance in determining important points to highlight.	Inaccurate conclusions or grammar interfere with communication. Or reports are poorly organized and require major rewrites.
Interviewing	**N/A to this rotation**	**Ready for Postdoctoral Practice**	**Needs Occasional Supervision**	**Needs Regular Supervision**	**Needs Remedial Work**
The intern gathers relevant interview data promptly, appropriately evaluating immediate concerns such as suicidality, homicidality, and any other safety issues. The intern makes appropriate contingency plans with client regarding safety issues if		Intern continuously demonstrates above professional competencies.	Intern needs guidance regarding interview of complex cases. Intern is aware of how to cope with safety issues, but continues to need	Intern recognizes potentially problematic cases, but needs guidance regarding detailed evaluation. Detailed	Intern delays in questioning client about immediate concerns. Intern forgets to ask about important safety issues or makes

Interviewing	N/A to this rotation	Ready for Postdoctoral Practice	Needs Occasional Supervision	Needs Regular Supervision	Needs Remedial Work
needed. The intern discusses all confidentiality issues openly with clients.			reassurance in supervision. May occasionally forget to discuss confidentiality issues promptly.	discussions are needed to cope with safety issues; intern handles them well. Occasionally needs prompting to discuss confidentiality issues with patient.	inadequate assessment or plan. Intern does not remember to address confidentiality issues, needs frequent prompting.

Case Conceptualization	N/A to this rotation	Ready for Postdoctoral Practice	Needs Occasional Supervision	Needs Regular Supervision	Needs Remedial Work
The intern formulates a useful case conceptualization, including both transference issues and dysfunctional cognitions, that draws on theoretical and research knowledge.		Intern independently produces good case conceptualizations within own preferred theoretical orientation, can also draw some insights into case from other orientations. Overt emotional issues are accurately and consistently identified, plans and reflects appropriately on deeper issues between sessions.	Reaches case conceptualization on own, recognizes improvements when pointed out by supervisor. Readily identifies emotional issues but sometimes needs supervision for clarification.	Reaches case conceptualization with supervisory assistance. Aware of emotional issues when they are clearly stated by the patient, needs supervision for development of awareness of underlying issues.	Responses to patients indicate significant inadequacies in theoretical understanding and case formulation. Misses or misperceives important emotional issues.

Treatment Planning	N/A to this rotation	Ready for Postdoctoral Practice	Needs Occasional Supervision	Needs Regular Supervision	Needs Remedial Work
The intern formulates appropriate therapeutic treatment goals in collaboration with the patient. The intern collaborates with patients in crisis to make appropriate short-term safety plans, and intensify treatment as needed.		Consistently sets realistic goals long-term in accordance with patients' needs and desires. Can autonomously work with patient in crisis to establish appropriate short-term plan.	Sets appropriate goals with occasional prompting from supervisor, distinguishes realistic and unrealistic goals. Shows good professional skills, but needs occasional reassurance after coping with patients in crisis.	Requires ongoing supervision to set therapeutic goals aside from those presented by patient. Needs to refine crisis plans in collaboration with supervisor.	Fails to set any goals without prompting from supervisor. Fear overwhelms abilities in patient crises.
Adult Client Interventions	**N/A to this rotation**	**Ready for Postdoctoral Practice**	**Needs Occasional Supervision**	**Needs Regular Supervision**	**Needs Remedial Work**
The intern presents interventions that well-timed, effective and consistent with empirically supported treatments.		Interventions and interpretations facilitate patient acceptance and change. Demonstrates motivation to increase knowledge and expand range of interventions through reading and consultation as needed.	Most interventions and interpretations facilitate patient acceptance and change. However, intern requires supervisory assistance with the timing and delivery of more difficult interventions.	Many interventions and interpretations are delivered and timed well. Needs supervision to plan interventions and clarify interpretations.	Most interventions and interpretations are rejected by patient. Has frequent difficulty targeting interventions to patients' level of understanding and motivation.

Group Interventions	N/A to this rotation	Ready for Postdoctoral Practice	Needs Occasional Supervision	Needs Regular Supervision	Needs Remedial Work
The intern appropriately copes with group therapy challenges and complications such as conflict, scapegoating, premature termination and challenges to leadership.		Consistently manages issues as they arise in group, builds cohesiveness while dealing with complications. Aware of own strengths and weaknesses as a group leader.	Seeks input on group process issues as needed, then works to apply new knowledge and skills. Needs occasional feedback concerning strengths and weaknesses.	Welcomes ongoing supervision to identify key issues and initiate group interaction. Actively working on identifying own strengths and weaknesses as a group leader.	Responses to patients and management of group process indicates significant inadequacy in the theoretical understanding and implementation of group process. Defensive or not insightful when discussing strengths and weaknesses.
Child Family Interventions	**N/A to this rotation**	**Ready for Postdoctoral Practice**	**Needs Occasional Supervision**	**Needs Regular Supervision**	**Needs Remedial Work**
The intern presents interventions that well-timed, effective and consistent with empirically supported treatments.		Interventions and interpretations facilitate patient acceptance and change. Demonstrates motivation to increase knowledge and expand range of interventions through reading and consultation as needed.	Most interventions and interpretations facilitate patient acceptance and change. However, intern requires supervisory assistance with the timing and delivery of more difficult interventions.	Many interventions and interpretations are delivered and timed well. Needs supervision to plan interventions and clarify interpretations.	Most interventions and interpretations are rejected by patient. Has frequent difficulty targeting interventions to patients' level of understanding and motivation.

Client Progress	N/A to this rotation	Ready for Postdoctoral Practice	Needs Occasional Supervision	Needs Regular Supervision	Needs Remedial Work
The intern identifies, collects, documents, and explains appropriate outcomes		Appropriate outcomes selected, collected, interpreted, documented and used.	Occasionally needs help selecting or interpreting an instrument	Occasionally forgets to give an instrument or frequently needs help selecting an instrument	Does not use outcome measurements regularly and/or uses them inappropriately
*Therapeutic Alliance		**Ready for Postdoctoral Practice**	**Needs Occasional Supervision**	**Needs Regular Supervision**	**Needs Remedial Work**
The intern consistently achieves a good rapport with clients.		Establishes quality relationships with almost all clients, reliably identifies potentially challenging patients and spontaneously makes adjustments.	Generally comfortable and relaxed with patients, handles anxiety-provoking or awkward situations adequately so that they do not undermine therapeutic success.	Actively developing skills with new client populations. Relates well when has prior experience with the population.	Has difficulty establishing rapport, alienates clients or shows little ability to recognize problems when they occur.
*Supervision/Consultation (receive)		**Ready for Postdoctoral Practice**	**Needs Occasional Supervision**	**Needs Regular Supervision**	**Needs Remedial Work**
The intern seeks consultation or supervision as needed and uses it productively.		Actively seeks out professional consultation as needed when treating complex cases. Makes generally accurate self-appraisal, recognizes tendencies to misjudge abilities and shows	Open to feedback when offered, tries new ideas and behavior with varying degrees of comfort and success. Shows awareness of strengths and weaknesses, uses supervision	Accepts supervision in many areas, but occasionally shows defensiveness. Needs supervisory input for determination of readiness to try new skills.	Frequently defensive or confused by feedback, resists use of important and necessary feedback, overly dependent on habitual ideas and behavior. Seriously misjudges

*Supervision/Consultation (receive)		Ready for Postdoctoral Practice	Needs Occasional Supervision	Needs Regular Supervision	Needs Remedial Work
		particular care in those areas.	well for clarification of areas of uncertainty.		strengths and/or important limitations.
Supervision/ Consultation (provide)	N/A to this rotation	Ready for Postdoctoral Practice	Needs Occasional Supervision	Needs Regular Supervision	Needs Remedial Work
The intern performs an assessment of the client referred for consultation, incorporating mental status exam, structured interview techniques or psychological assessment, as needed, to answer the referral question.		The intern is able to choose appropriate means of assessment to respond effectively to the referral question; reports and progress notes are well-organized and provide useful and relevant recommendations with minimal supervisory input.	Occasional input is needed regarding appropriate measures of assessment and effective write-up of report or progress notes to best answer the referral question	Needs continued supervision regarding appropriate assessment techniques to complete consultations as well as input regarding integration of findings and recommendations.	Consultation reports and progress notes are poorly written and/or organized. Fails to incorporate relevant information and/or use appropriate measures of assessment necessary to answer the referral question.
Practitioner-Scholar Model		Ready for Postdoctoral Practice	Needs Occasional Supervision	Needs Regular Supervision	Needs Remedial Work
*The intern seeks out professional writings regarding treatment cases as needed to enhance knowledge about the patient's psychological status.		Intern independently seeks out and reads professional writings pertaining to cases at hand.	Intern identifies areas of knowledge that need enhancement with a particular client and asks for suggestions regarding readings.	Intern readily accepts and reads professional writings as assigned by the supervisor.	Intern procrastinates regarding professional readings assigned by supervisor to learn essential treatment-oriented competencies.

Practitioner-Scholar Model		Ready for Postdoctoral Practice	Needs Occasional Supervision	Needs Regular Supervision	Needs Remedial Work
The intern is able to develop a plan for research or other professional writing.	N/A to this rotation	The intern, alone or in conjunction with a colleague, is a full participant in development of the plan.	The intern provides substantive input into the plan.	The intern provides helpful suggestions regarding design and implementation of a colleague's plan.	The intern does not follow-through with responsibilities in development of plan.
The intern demonstrates professional skills sufficient to accomplish the goals of the research and/or writing project.	N/A to this rotation	The intern, alone or in conjunction with a colleague, is a full participant in the progress of the project.	The intern demonstrates the ability to execute at least one aspect of the project independently.	The intern provides significant assistance in the accomplishment of the project.	The intern does not follow-through with responsibilities in accomplishing the goals of the project.

*Diverse Populations	Ready for Postdoctoral Practice	Needs Occasional Supervision	Needs Regular Supervision	Needs Remedial Work
The intern maintains sensitivity to cultural and other individual differences.	Spontaneously raises issues relating to individual differences with clients as appropriate, conveys ease in working with a range of backgrounds, aware and sensitive to individual differences, accurately self-monitors own responses to differences.	Initiates supervisory discussion regarding areas of inexperience in personal differences when needed.	Has discomfort with some clients, resolves such issues effectively through supervision.	Has difficulty recognizing or working around prejudices, holds some beliefs which limit effectiveness with certain clients, unable to surmount these problems to date in supervision.

*Ethical & Humane Practice	Ready for Postdoctoral Practice	Needs Occasional Supervision	Needs Regular Supervision	Needs Remedial Work
The intern demonstrates good knowledge of ethical principles and consistently applies them appropriately, seeking consultation as needed.	Spontaneously and consistently identifies ethical issues, effectively resolves issues using consultation and supervision as needed	Consistently recognizes ethical issues, appropriately asks for supervisory input.	Generally recognizes situation where ethical issues might be pertinent, is responsive to supervisory input	Often unaware of important ethical issues, disregards supervisory input.

*Self-Awareness & Professionalism	Ready for Postdoctoral Practice	Needs Occasional Supervision	Needs Regular Supervision	Needs Remedial Work
The intern interacts professionally and appropriately with treatment teams, peers and supervisors at all times. The intern seeks peer support as needed.	Develops smooth working relationships, effectively relates to team members in accordance with their unique roles, effectively uses team format in the service of treatment needs. Develops positive alliances with other interns and colleagues, handles differences openly.	Actively participates in team meetings, but input is circumscribed. Seeks input from supervisors to cope with rare interpersonal concerns.	Progressing well on providing input in a team setting. Effectively seeks assistance to cope with interpersonal concerns with colleagues.	Personal characteristics or dysfunctional behaviors significantly limit the intern's ability to participate in team model, e.g. withdrawn, overly confrontational, insensitive. Has hostile interactions with colleagues.
The intern takes on responsibility for key client care tasks, autonomously ensuring that tasks are completed promptly. The intern demonstrates the necessary self-direction, in gathering	Takes initiative in ensuring that key tasks are accomplished, seeks responsibility. All reports and progress notes are filed promptly. Deadlines not needed. Fully dedicated to expanding knowledge and skills, seeks out	Systematically attends to all details with few prompts. Occasional deadlines needed to complete tasks. Shows initiative, eager to learn, beginning to take steps to enhance own learning.	Completes work effectively when given prompts or deadlines. Open to learning, waits for supervision to present ideas.	Overly dependent on prompts or deadlines or frequently misses deadlines. Needs too much direction from supervisor, uninvolved.

*Self-Awareness & Professionalism	Ready for Postdoctoral Practice	Needs Occasional Supervision	Needs Regular Supervision	Needs Remedial Work
clinical and research information, to practice independently and competently as a postdoctoral psychologist.	and takes specific steps to follow-through on learning opportunities.			
The intern demonstrates positive coping strategies to manage personal and professional stressors to maintain professional functioning, so that quality patient care continues uninterrupted. The intern copes with professional challenges such as new responsibilities or client crises.	Exhibits good awareness of any personal and professional problems, impact of stressors on professional practice is limited to subtle effects such as ineffi-ciency. Seeks supervision and/or personal therapy to resolve issues if needed. Level of confidence accurately matches current abilities, experi-ences minor stress handling crises or major new responsibilities.	Has good insight into the impact of stressors on professional functioning, seeks supervisory input to minimize this impact. Confident in practiced areas of competence, needs supervi-sory encourage-ment to venture into new areas.	Intern needs significant supervision time to minimize the effect of stressors on professional functioning. Confidence fluctuates, seeks reassurance from supervisor.	Ongoing stresses significantly hamper professional functioning. Personal problems significantly disrupt professional practice, intern denies problems when brought up by supervi-sor. Lack of confidence is communicated to others in a manner that undermines the quality of work.
The intern understands and uses own countertransfer-ence produc-tively in the treatment.	Intern uses countertransfer-ence to formulate hypotheses about client's current and historical social interactions during session to patient as appropriate. Consultation sought as needed for complex cases.	Intern can use countertransfer-ence to formulate hypotheses during supervi-sion sessions. Interventions generally presented in the following session.	Intern under-stands basic concepts of countertransfer-ence. Intern is able to identify own emotional reactions to patient as counter transference. Supervisory input is frequently needed to process the information gained.	Intern holds on to anger, frustration or has other intense emotional response to the patient, blaming patient and unable to see countertransfer-ence issues, even with supervisory input.

Supervisor Comments

Summary of Strengths:

_____
_____

Areas of Additional Development or Remediation, including Recommendations:

_____

Conclusions

Competency Goal for evaluations done at 3, 6, or 9 months: All competency areas will be rated at a level of competence of **Needs regular supervision** or higher. No competency areas will be rated as **Needs remedial work.**

Competency Goal for evaluations done at 12 months: At least 80% of competency areas will be rated at level of competence of **Needs occasional supervision** or higher. No competency areas will be rated as **Needs remedial work**. Note: exceptions would be specialty area rotations that would take a more intensive course of study to achieve this level of competency and the major supervisor, training director and intern agree that a level of **Needs regular supervision** is appropriate for that particular rotation, e.g. a neuropsychology major rotation for a general track intern.

_____ The intern HAS successfully completed the above competency goal. We have reviewed this evaluation together.

_____ The intern HAS NOT successfully completed the above competency goals. We have made a joint written remedial plan as written below, with specific dates indicated for completion. Once completed, the rotation will be re-evaluated using another evaluation form, or on this form, clearly marked with a different color ink. We have reviewed this evaluation together.

Supervisor Signature	Date	Intern Signature*	Date

*I have received a full explanation of this evaluation. I understand that my signature does not necessarily indicate my agreement.

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20 Consultation

Jon Frew

Abstract: Not long ago the vast majority of clinical psychologists practiced in relatively restricted roles providing assessment and therapy services. There has been a pronounced shift in the field and today most psychologists are moving into expanded roles and activities. One of these roles is organizational consultation. In this chapter some of the requisite competencies to provide consultation services to organizations are outlined at both the basic and expert levels. As there is no uniformity or agreement about the number or definition of consultation competencies, a case study approach was employed to identify the range of competencies that were employed by the author in two organizational consulting projects.

20.1 Overview

In 1990, I designed and taught a course entitled "Organizational Consultation" in a PsyD program at a university in the Pacific Northwest. The class was a popular elective in a doctoral program curriculum replete with required courses which prepared students to assume the traditional roles of a clinical psychologist. In that era, the vast majority of students in that program aspired to a career trajectory that would ultimately land them in private practice, in which they would provide assessment and psychotherapy services.

Despite the popularity of the organizational consultation class, which was offered once a year until 1998, it was viewed by most students as a "boutique" course, a curious diversion from the program's rigorous clinical training and as a class that provided a skill set that would probably never be utilized. In 1999, I launched a new course in that PsyD program entitled "Professional Roles." This course was designed to reflect the educational model of the National Council of Schools and Programs of Professional Psychology (NCSPP) first outlined in the landmark article written by Peterson, Peterson, Abrams, and Stricker (1997). Organizational consulting as a role and a set of competencies was transplanted into the Professional Roles course, joining others including supervision, teaching, management, and administration.

Over the course of the past 10 years, as I have continued to modify and teach the Professional Roles class, I have noted a dramatic shift in the attitudes and perspectives of current clinical psychology students, concerning the place of organizational consulting (and other nonclinical roles) in their career aspiration portfolio. The vast majority of students now understand that their future as a professional psychologist will be more financially rewarding and personally satisfying, if they are trained to carry out both clinical and nonclinical activities in a variety of roles. This shift in the recent and current students' career visions is evident as well in the broader field of psychology. Levant et al. (2001, p. 80) encourage psychologists to envision and access new roles.

▶ For professional psychology to continue to grow and flourish, psychologists must identify and conceptualize roles that they are well suited to take up in the near and more distant future. …

[T]hese roles are not really new. What is new, however, is thinking of these roles as aspects of psychology's core identity.

With the expansion of roles and activities carried out by clinical psychologists comes a concurrent effort to identify the basic competencies required to be proficient in these roles. Graduate training programs in psychology have been forced to take a step back and consider this question: "What are the competencies requisite for professionals who refer to themselves as clinical psychologists?" The organization that has been most active in the discussion of expanded professional roles, curriculum revision, and the identification of competencies has been NCSPP. They have identified the following core competencies: relationship, assessment, intervention, research and evaluation, consultation, education, management, supervision, and diversity. These nine terms can be sorted into three categories (Frew & Machell, 2007):

Roles	Activities	Competencies
Consultant	Assessing	Relationship
Educator	Intervening	Assessment
Supervisor	Evaluating	Intervention
Manager	Consulting	Research and evaluation
	Teaching	Consultation
	Managing	Education
	Supervising	Management
		Supervision
		Diversity

Despite the role performed by a clinical psychologist (clinical or expanded), the work almost always requires the skill set to form relationships, to accurately assess, choose and deliver appropriate interventions, to evaluate the impact of the intervention, and to have some level of multicultural competence. NCSPP's identification of core competencies was a good start, leaving much work to be done. The Association of Psychology Postdoctoral and Internship Centers (APPIC), with the support of American Psychological Association (APA) and 30 other groups, convened a conference entitled "Competencies Conference, 2002: Future Directions in Education and Credentialing in Professional Psychology," which was attended by more than 130 psychologists. They grappled for 3 days, attempting to address the thorny issues of how competencies are defined, taught, and assessed in graduate psychology training. Kaslow, Thorn & Pate (2005) provided a summary of the conference. In 2007, the membership of NCSPP approved the Competency Developmental Achievement Levels (DALs) to be included in the education and training model. The DALs were a work product of the NCSPP 2007 conference and will be discussed later in this chapter.

This current volume(s), *The Handbook of Clinical Psychology Competencies*, is a significant contribution to the efforts to sharpen the focus of a competency model. The topic of this chapter is consultation.

The term "consultation" in the field of psychology often has a different connotation than it does in the business world. Psychologists (and physicians) frequently think of consultation in terms of clinical consultation. You have a question about your patient's diagnosis and you call an expert for a consultation about your patient. A three-party matrix is created connecting patient, therapist, and expert consultant. This triangular relationship is present in all consultation activities as is the notion that services will be provided to the client/patient directly by the treating psychologist and indirectly by the consultant.

In the world of business, consultation means organizational consultation. The client is the organization itself or some subset of the organization. Organizational consultation is the topic of this chapter. Organizational consultation can be carried out by individuals from a range of backgrounds and training sets. In this chapter, I will discuss psychologists in the role of organizational consultants. I will make the case that psychologists with their exhaustive clinical training are well suited to acquire the competencies required to be consultants to organizations. In addition, psychologists must practice and provide services in accordance with APA ethical and multicultural guidelines, whereas consultants from other backgrounds and disciplines may have no such guidelines regulating their work.

20.2 Personal Journey

I was trained and received my Ph.D. in Counseling Psychology. Within my doctoral program, I was able to complete a minor in organizational development (OD) and small group studies. I entered the field with a strong interest in working with individuals, groups, and organizations.

In my first post-Ph.D. job, I held a position in a university counseling center. Within 2 years, I was promoted to the director's role. My supervisor became aware of my knack for understanding organizational dynamics, and began to ask for my input and opinion about some of the complex political pressures she was experiencing as the only woman in an executive "cabinet" of all white men. I was flattered by this attention and recognition of some of my incipient skills. I found myself in a type of executive coaching relationship, as an internal (not external) consultant, and I was advising my own boss. I tell this story today to my students as an example of a very perilous way to engage in a consulting relationship. Ultimately, my supervisor fell out of political favor with the university president and, because I was closely associated with her, my stock value fell dramatically as well with the powers-to-be.

It was during that same 5-year period, however, that I got my first legitimate consulting job. I was hired by a nonprofit organization in the community to do an employee satisfaction survey. I met with the executive director and the board, interviewed all the employees, and delivered a written and oral report of my findings. This consultation project went very well and the organization made a number of changes which improved employee satisfaction and retention.

Twenty-five years later, I reflect on a career in which I have been able to have a steady stream of organizational clients representing businesses (small and large) and nonprofit, educational, and government organizations. Organizational consulting has never been a full-time endeavor. Rather, I have integrated my consulting work with clinical private practice, teaching, training, and writing. I am privileged to be able to teach consultation to students in both a Master's and PsyD program and be the director of an organizational track in a PsyD program. Identification of competencies in organizational consulting and how to teach them is still in its

infancy in the field of psychology. In the "Basic" and "Expert" competency sections of this chapter, I will outline what is known and the work ahead of us.

20.3   Selected History

Earlier I pointed out the differences between organizational consultation and clinical consultation. Another clarification is also necessary. Within the field of psychology, there are clinical psychologists, industrial/organizational (I/O) psychologists, and consulting psychologists. None of these designators is a pure type because there are clinical psychologists who engage in consultation activities and I/O psychologists who might do clinical work. Lowman (1998) differentiates these three types of psychologists based on emphasis. The clinical psychologist works primarily with individuals, wherein the I/O psychologist sees the organization as the client, while the consulting psychologist "plays no favorites" and sees the individual and the organization as the client.

Consulting psychology has a division (13) in APA, has been around in various iterations since 1915, and is a place that psychologists who engage in organizational consultation can call home. O'Roark (2007) stated that the attempt to identify competencies can be dated to 1920, when the APA's Standing Committee on Certification of Consulting Psychologists was charged with identifying core consulting competencies. Unfortunately, that initiative was severely derailed when the Consulting Psychology division was stricken from APA bylaws from 1926–1945. In 1946, after World War II, APA reorganized and the Division of Consulting Psychology, now known as the Society of Consulting Psychology, was reestablished.

Other streams have fed the river of organizational consultation in the past 60 years. In 1999, the Society of Consulting Psychology (SCP) launched a "Best of the Century" survey to determine who had the most influence on consulting psychology during the past century. Surveys were mailed to 23 past presidents of Division 13 and 300 general members, with a response rate of 70% from the past presidents and 8% from the general membership or 39 usable surveys (as reported by O'Roark, 2007).

Kurt Lewin was named as the most influential figure in the past century in the field of consulting psychology. Lewin, who died in 1947, was a social psychologist and is best known for his writings in field theory (Lewin, 1951) and as one of the founders of the National Training Laboratory in Bethel, Maine. Lewin is also known as the originator of "action research," although an earlier version of a very similar approach to OD was outlined by Collier (1945). Lewin's contributions were manifold and his belief in the democratic/collaborative process (having fled Nazi Germany in the late 1930s) in organizations is notable. The consultant's role after collecting data is to feed that data back into the system and to the individuals who provided it and to facilitate a process, whereby the members of the organization derive meaning and action steps from that data. This is a practice which has lost favor with many contemporary consultants who interpret the data they collect and present it only to the sponsors who have commissioned the assessment.

Another frequently cited individual in that survey was Caplan, whose *Theory and Practice of Mental Health Consultation* (1970) was an important work in a surge of contributions to the consulting literature which took place in the 1970s. Caplan outlined four types of consultations that could occur in mental health organizations including "program-centered" and "consultee-centered administrative." Both of these types of consultation

were departures from the more traditional client-centered (supervision) awtee-centered (clinical consultation) approaches, and opened the door for organizational consulting and coaching in mental health settings. Other prominent names in the survey included Levinson, whose *Organizational Diagnoses* (1972) was named most often as the most influential writing, and Schein who was cited for his works *Process Consultation* (1969) and *Organizational Culture and Leadership* (1985).

The field of OD is closely related to consulting psychology and organizational consultation. OD consultants concern themselves primarily with assisting their clients to undertake planned (typically long-term) organizational change processes. Efforts to identify and define OD competencies have been ongoing since the 1970s (e.g., Warrick & Donovan [1979] and Sullivan [1974]). More recently, Worley, Rothwell, and Sullivan (2005) surveyed 365 early, mid, and late career OD practitioners using a list of 141 competencies generated originally by Sullivan (1974) and which have been updated annually since 1992. The survey task was for respondents to rate how important the competencies were in successful OD practice. The authors were able to reduce the number of critical competencies from a cumbersome 141 to a more workable 20–24. Perhaps the most intriguing finding was that "self-mastery" is the most important competency an OD practitioner can have. "Viewed not as an intervention in the system, but a characteristic of the person doing the work, self-mastery allows the practitioner to access and apply theories and models in a customized rather than a 'canned' fashion" (p. 158).

20.4 Competencies Revisited

I mentioned earlier that the quest to identify and define the basic competencies involved in organizational consulting can be dated back to 1920. More recently, the Education and Training Committee of Division 13 published the Principles for Education and Training at the Doctoral and Postdoctoral Level in Consulting Psychology/Organizational (2007). In that document, competencies were divided into three domains: individual level, group level, and organizational/systemic level with the proviso that many competencies (e.g., assessment) are required in more than one domain. In that same document, ten general competencies were added: (1) self-awareness and self-management; (2) relationship development; (3) assessment; (4) process consultation/action research; (5) interventions; (6) knowledge of theory, case studies, empirical research, applications, evaluation methods; (7) multicultural and international awareness, knowledge of sociopolitical backgrounds and cultural values and patterns; (8) research methods and statistics; (9) business operations, legal, industry regulations, technological advances; and (10) professional ethics and standards.

The Society for Consulting Psychology has taken the lead for the overall field of organizational consultation in defining the basic and more advanced competencies necessary to provide consultation services. O'Roark (2007) summarizes the task of consulting psychologists very clearly.

▶ Consulting psychologists are practitioners of applied psychology. Interventions and educational programs require knowledge of relevant information, drawn from credible sources with verifiable data supporting effectiveness of consultation practices, approaches, and strategies for problem solving. Services are tailored to respond to requests from specific client populations with particular cultural contexts. To provide competent services, practitioners review and evaluate the best available research evidence (O'Roark, 2007, p. 189).

She also points out, citing APA's policy on evidence-based practice, that interventions that have not been studied in controlled trials (virtually impossible to do in organizational consulting) can still be effective. "Consulting practitioners work as scientist-practitioners, methodically planning future interventions based on what has been beneficial in the past for clients in comparable circumstances" (O'Roark, 2007, p. 189).

20.5   Challenges Ahead

In a recent article, Cooper, Monarch, Serviss, Gordick, and Leonard (2007) outline some of the significant challenges which lie ahead for consulting psychologists and psychologists in training or practice who seek to provide consultation services. On one hand, more psychologists are becoming full-time and part-time consulting psychologists either earlier in their career or as a first career choice. Thus, there is a need for comprehensive standards of competence, educational opportunities, and training experiences. On the other hand,

▶ academic barriers and scattered resources limit education and training opportunities for four distinct groups of CP practitioners: beginning (0–3 years/first career choice), entry (0–3 years/experience in another psychological specialization), mid-level (4–7 years experience) and senior consulting psychologists (those with 8 + years of experience in the field). (p. 3)

The authors discuss external barriers, including a dearth of graduate training programs in consulting psychology, predoctoral and postdoctoral training sites and supervised work experiences. Another external obstacle is the unwillingness of many state licensing boards to "count" hours that are not devoted to direct clinical service.

In terms of internal barriers, Cooper et al. (2007) state that although the development and publication of competencies for consulting psychology is an excellent start,

▶ continued development of companion documents for CP/mental health, CP/schools, CP/forensic, and other major types of psychological consulting practice is imperative. Even with a prototype statement of graduate and postdoctoral curricula, the quality of current education and training opportunities is difficult to assess without continued identification of characteristics and competencies that can serve as benchmarks and aspirational guideposts. (p. 3)

I would contest the first point made and absolutely concur with the second. I am not sure that it is "imperative" to develop companion documents which highlight consulting competencies according to a specific setting. My own consulting work has crossed most types of organizations, and I have found the skills necessary to translate well across settings. I do agree, however, that there is a great deal of work ahead regarding the task of identifying the most critical core competencies for consultation, determining the best way to teach them, and evaluating the degree to which the competencies have been learned.

20.6   Definition, Characteristics, and Stages

For the purposes of this chapter, consultation will be defined using the definition established by Division 13 of the American Psychological Association, SCP Bylaws (2008):

▶ Consulting psychology shall be defined as the function of applying and extending the special knowledge of a psychologist, through the process of consultation, to problems involving human behavior in various areas. A consulting psychologist shall be defined as a psychologist who provides specialized technical assistance to individuals or organizations in regard to psychological aspects of their work. Such assistance is advisory in nature and the consultant has no direct responsibility for its acceptance. Consulting psychologists may have as clients, individuals, institutions, corporations, or other kinds of organizations.

There are some shared characteristics which are present in most types of consultation. Consultation is triadic and involves a consultant, a consultee, and a client system. Consultation services are indirect and voluntary in nature. Consultation is provided by an individual(s) external to the client system. Consultation services can be related to content (what the organization does) or process (how the individuals in the organization work together [or not] as they carry out the tasks of the organization).

Finally, organizational consultation takes place over time and through a series of stages. These stages have been defined somewhat differently by the various authors and practitioners who have described them. These stages are key because each involves specific consultation skills. For the purposes of this chapter, I will use the stage model that I teach in my consultation classes. It closely adheres to most of the stage models described in the literature:

- Initial contact and screening
- Entry and preliminary assessment
- Contracting
- Assessment
- Feedback and identification of issues of concern
- Goal setting
- Intervention(s)
- Evaluation
- Termination

In the following two sections, basic and expert competencies will be discussed and illustrated through case studies. Some of the competencies pertain to particular stages in the consultation process. Most are required through all the stages.

20.7 Gaining Competence

The development and publication of the Principles for Education and Training at the Doctoral and Postdoctoral Level in Consulting Psychology/Organizations by members of Division 13 was a major step forward. Questions such as "What are the basic competencies to consult to organizations?", "How are they acquired?", and "How do we measure the attainment of competency?" were addressed at least to some extent.

Fuque and Newman (2002) were asked to review these principles and competencies from an academic perspective and commented as follows:

▶ We found the task of reacting to the principles to be much more difficult than we expected, due in part to the multiplicity and complexity of issues raised by such comprehensive training

principles. … Everyone involved in this process realizes that the publication of these proposed principles is only another step in the long process of trying to improve the services we provide to our clients. (pp. 223–224)

Fuque and Newman also point out that since the principles are organized around core competencies or end states, they can be obtained in a variety of ways not just through coursework.

Clearly the standardization and verification of the efficacy of consultation competencies is a work in progress. Moreover, how and where organizational consultants receive their training is varied and uneven. Cooper et al. (2007) summarize my last statement well:

▶ Largely, those who engage in the practice of consulting psychology have managed to accumulate sufficient training and expertise to function well in the role and have done so despite the historical absence of formal training programs and curricula. Consulting psychologists have followed diverse pathways to achieve and maintain competence. However, professional training and education venues have not yet been adequately defined or developed preparing consulting psychologists to address the growing interest in our services. (p. 2)

In the remainder of this chapter, I will address two core issues that have been brought to light primarily by the excellent work of the members of the SCP. The first is a need to define the basic (and expert) competencies in more practical, teachable terms. The second is how clinical psychology students who are interested in working as organizational consultants can be trained and prepared to offer these services.

20.7.1 What Are the Basic Competencies?

The SCP has published a list of core competencies. They are organized by levels: individual, group, and organizational/systemic. Competencies listed in these three domains may carry over to other levels as well. Example competencies are individual level (executive and individual coaching), group level (assessment and development of teams), and organizational level (organizational-level interventions). However, there is a problem with the language of these competencies. Executive coaching, team development, and organizational intervention are all activities that require training and skills, but the competencies involved in these activities are not clearly stated. More details are provided later in the SCP principles, but generally there is more focus on what the consultants do rather than the specific competency required to do it well.

From the world of OD, we have the competencies listed most recently by Worley et al. (2005). Again the language is problematic for the academic who is charged with training future consultants. For example, "self-mastery" was the most frequently endorsed competency in that survey but what does it mean and how do you teach it? A third group, NCSPP, has also been actively involved in developing lists of competencies for psychologists in training and practice. The result of their most recent effort is the DALs (2007). Unfortunately in that document, the consultation competency is combined with the "education" competency, and the knowledge and skills required to be a consultant and an educator are discussed together. Specific consultation competencies are not well articulated or defined.

20.7.2 How to Train Organizational Consultants

As mentioned earlier, those practitioners who identify themselves as organizational consultants come from a wide variety of backgrounds and have received their training in a variety of ways. We have an opportunity in the field of clinical psychology to develop specific programs and curricula and create standards and accountability in training psychologists to provide consultation services to organizations. Despite the advent of a few consulting psychology doctoral programs' consulting tracks, the formalization of training processes is in its infancy. Training must also occur beyond the classroom through workshops, training programs, supervised field work, and mentoring by seasoned consultants.

20.8 Basic Competencies

Clinical psychologists who want to prepare themselves to provide consultation services to organizations respond favorably to training anchored by three models or frameworks: The NCSPP basic competencies, process consultation and stages of consultation.

The NCSPP basic competencies of relationship, assessment, intervention, and evaluation translate fluidly from clinical work to organizational work as does the diversity competency. Schein's (1988) "process consultation" is a model of consultation which is compatible with the developmental level of psychologists in training to become consultants. Schein defines his model as "a set of activities on the part of the consultant that help the client to perceive, understand and act upon the process events that occur in the client's environment in order to improve the situation as defined by the client" (p. 11). Adopting process consultation as a model improves the skill set of psychologists, because it allows them to focus on the relationship issues within organizations and avoid being perceived as the expert on the content or product of that organization. Finally, learning how to consult to organizations involves understanding the competencies required for each stage of the consulting process. Therefore, a stage model is extremely useful.

No two consulting projects are exactly the same, but the generic consulting process typically has these stages:

Stages of consultation	Clinical counterpart
Initial contact	Screening
Entry and preliminary assessment	Intake
Contracting	Informed consent
Assessment	Assessment
Feedback, diagnosis, goal setting	Treatment planning
Intervention	Intervention
Evaluation	Measuring progress
Termination	Termination

I have listed the clinical counterparts to the right of the stages of consultation. The similarity in the stages of clinical work and consulting to organizations accelerates the learning curve of the clinical psychologists or the clinical psychology students who seek training in consultation.

Before identifying and discussing the basic competencies, I will provide a brief case example of a consultation project I completed several years ago. I have altered a number of the details of this project to protect my client's identity and enhance this example as a teaching case.

20.8.1 Case Example #1

I was contacted by Peter who was an architect at a relatively large architecture firm. Peter knew of me as he attended a class I taught in a local MBA program. We spoke by phone about the possibility of me doing some work for his firm (*initial contact*). After some initial screening to make sure that I had the skills and experience to address the issues Peter laid out, we agreed to have a meeting with Peter, his boss Larry, who was a project manager, Craig, the president of and a partner in the firm, and Lisa, who was the chief financial officer. The meeting took place several days later at the architecture firm. During that meeting, I asked the four of them to tell me what they saw as the issues of concern and the focus of a consulting process (*entry and preliminary assessment*).

In this exploratory meeting, there was a consensus that Larry's project group had some significant interpersonal conflict and communication issues. The group had just completed a project which involved the design of a university classroom building but problems within the group resulted in the final product coming in over budget and several weeks behind schedule. Another project (a state government office building design) was about to be launched, and Craig and Lisa were reluctant to assign the project to this team. Peter and Larry, on the other hand, believed that it made more sense to try to improve this project group's performance rather than dismantle this group to form another. I proposed a further assessment process in which I would have contact with every member of the project team (*contracting*). In the next week, I conducted individual interviews with each group member and sat in on a project group meeting led by Larry (*assessment*).

I then reviewed and summarized the data I had collected and developed a written and oral report that focused on key themes, concerns, and strengths which emerged from the input of group members. I had a follow-up meeting with Peter, Larry, Craig, and Lisa. During that meeting, I presented feedback from the assessment phase and facilitated a discussion in which they were able to identify the key problems and the changes they viewed as necessary for this group to function together at a higher level on the next project (*feedback*, *diagnosis and goal setting*). I then proposed several initiatives that would potentially support the changes they were seeking as well as a method by which change could be measured. The initiatives proposed involved several psychoeducational trainings (which focused on communication, conflict resolution, and team building), "coaching" with Larry to enhance his leadership skills, and a modification to the present compensation system in which individuals would receive bonuses and firm-wide recognition at different stages of the project, if the project group as a whole either met (or exceeded) a series of deadlines or budgetary goals. This final initiative was a response to a culture of competitiveness which existed in the group whereby newer members of the firm would

try to stand out to the firm's partners as up and coming "stars" by looking better than their peers (*intervention*).

Efficacy of the consulting work was evaluated by measuring the degree to which previously determined benchmarks (related to meeting deadlines and staying within budget) were met (*evaluation*). I left the project several months after my initial meeting with Peter, Larry, Craig, and Lisa before the project was completed, but after determining that the group was functioning at a much higher level based on the evaluation method just mentioned (*termination*).

I will use this case study to identify and briefly discuss basic consultation competencies.

20.8.1.1 Initial Contact

In this phase, three basic competencies are required: *Relationship* skills including the ability to listen and put the caller at ease are critical. *Interviewing* skills are also necessary so that the information necessary for the consultant to decide whether to move forward is obtained quickly and efficiently. Finally, *knowledge of the consulting process* is required so that the consultant can begin to orient the caller on how the process will work, the next steps, and who should be present during the next phase.

20.8.1.2 Entry and Preliminary Assessment

Again *relationship* skills are critical in this phase. The consultant is now meeting with individuals from the client system on their "turf." To *interviewing* skills I would add *knowledge of group dynamics*, *group leadership skills*, and *observation skills*. Most consulting projects begin (or end) with an exploratory meeting with key players of the organization. In my meeting with Peter, Larry, Craig, and Lisa, I wanted to demonstrate that I had solid interpersonal skills, could facilitate a small-group process, could inspire all parties to speak up and respond to "smart" questions and probes. Smart questions are developed through the initial contact by doing your "homework" about the organization before the first meeting on site and by using *listening* and *observational skills* during the meeting to formulate further questions or to propose preliminary statements of issues of concern. Sometimes *conflict mediation skills* are useful in this type of meeting to redirect and reframe heated differences into useful "multiple perspectives." Finally, *diversity* skills come into play in this phase. For example, in this case example, I noticed that Lisa's comments were either ignored or minimized by two of the men in the meeting, so I intentionally highlighted several of her comments in my summary statements near the end of the meeting.

20.8.1.3 Contracting

Contracting is another critical phase of any consultation project. It occurs at both the informal and formal level (Schein, 1988). On the informal level, the consultant must work toward a mutual understanding with the client regarding each party's expectations about the nature and the amount of work to be done. Formally, the consultant must have the skill to *construct and*

negotiate a written contract which details the terms of the consulting relationship. A crucial aspect of all consultation work is the *determination of "who is the client?"* This is a competency in and of itself because in consultation, unlike clinical work, there can be several types of client. Schein refers to contact clients or the individual who makes the first call to the consultant (Peter), intermediate clients or those who are involved in early meetings (Peter, Larry, Craig, Lisa), primary clients on the "unit" targeted for the assessment and intervention (the whole project group), and ultimate clients, anyone directly or indirectly impacted because of the consultation (pp. 117–118).

20.8.1.4 Assessment

NCSPP has designated "assessment" as a primary competency across most of the roles and activities of clinical psychologists. In organizational consultation, assessment is both an ongoing process beginning with the initial contact stage and an activity specific to particular phases of a consulting process. There are a number of competencies involved in the assessment stage of consultation. In my work with the architecture firm, I conducted interviews and observed a project group meeting. Assessment through individual interviewing requires competency in *developing the interview questions* and *interviewing* itself. Assessment through observation of groups requires competency in *observing communication processes* and *knowledge of group dynamics* (e.g., leadership styles, decision-making models, phases of group development, etc.). Assessment in organizations is also carried out using surveys or focus groups. *Developing questionnaires* (assuming that a nonstandardized one is necessary) and *administering questionnaires* are additional competencies often required in the assessment phase. *Facilitating focus groups* is another specific competency. Focus groups can be utilized alone but are more frequently combined with other assessment methods like interviews and surveys.

20.8.1.5 Feedback, Diagnosis, and Goal Setting

Before the consultant can give feedback, the data collected during the assessment phase must be organized, reviewed, and shaped into a format that will be most useful to the client. I will name this competency *organizing and formatting assessment data*. The task can be challenging if the consultant has collected information from many (what are the central themes and concerns) or from few (how to protect the anonymity of individuals). The next competency required is *giving feedback*. Assessment data are usually presented both orally and in writing. *Report writing* is a skill specific to the feedback phase of consultation. So is *conducting a feedback session*. From a process consultation perspective, one of the goals of the feedback session is to encourage the clients to "own" their data. In other words, the consultant does not tell the clients what their problem is and what they need to do about it. Rather, the consultant uses *group leadership skills* to facilitate a dialogue in which problems are identified (diagnosis) and goals for change are proposed. I worked in this capacity with Peter, Larry, Craig, and Lisa, and they determined that the project group's poor performance could be mediated by a shift in culture from rewarding individual achievement to more collaboration.

20.8.1.6 Intervention

The term "intervention" favored by NCSPP and utilized broadly throughout the consultation literature is again too broad and too general to capture specific competencies. I will return to the topic of intervention in the next section of this chapter on expert competencies because specific types of organizational interventions typically require more training and experience to execute. The interventions I used with the architecture firm could all be seen as competencies: *preparing and delivering trainings*, *team building*, *executive coaching* and *compensation system analysis*. These interventions represent the individual, group, and organizational/systemic levels of competencies proposed in the Division 13 principles.

20.8.1.7 Evaluation

Organizational consultants must also evaluate the results of their efforts. The competencies involved are *identifying consulting goals* (always in conjunction with the client) and specifying how to *measure progress toward consulting goals*. Unfortunately, this is the phase of consultation most commonly overlooked by consultants. The evaluation of consultation typically takes place during and after the intervention stage. The questions are "what are the changes the client system wants (short- and long-term) and how can the interventions recommended and carried out by the consultant to create those changes be measured to see if they have actually worked?" Evaluation can be both formative as well as summative so that interventions can be modified along the way. In the case of my work with the project team, there were time deadlines and budget goals that served as ways to measure group performance (compared to the previous project) and the success of my interventions.

20.8.1.8 Termination

Although there is no particular competency associated with this stage, organizational consultants need to know when to leave and complete a consulting project. As in clinical work, the key is not to abandon prematurely or engender dependency.

20.8.2 Summary of Competencies

In ❯ Table 20.1, the competencies identified in the previous section are listed. Several of the competencies (e.g., relationship, interviewing skills) were cited more than once over the stage of consultation. The checkmarks highlight the competencies that are required across most or all of the stages of a consulting process.

Two of the competencies, relationship and diversity, are critical to all phases and aspects of a consulting project. Each of these general terms can be reduced into more specific competencies. For example being competent in the area of relationship requires interpersonal skills, empathy, listening skills, etc. Likewise, the diversity competency is sometimes referred to as "multicultural competence" and involves knowledge and skills in terms of self-awareness, awareness of others, and utilization of contextually relevant interventions.

◼ **Table 20.1**
Competencies from case example #1

	Most phases	All phases	Level
Relationship		✓	BE
Listening skills			B
Conflict mediation skills			BE
Interviewing skills			BE
Knowledge of consulting process	✓		B
Knowledge of group dynamics			BE
Group leadership skills			BE
Observation skills	✓		BE
Observe communication patterns			BE
Diversity		✓	BE
Construct and negotiate contract			B
Determine who is the client	✓		B
Developing interview questions			B
Develop and administer surveys			B
Organize and format assessment data			BE
Giving feedback			BE
Report writing			BE
Conducting feedback meeting			BE
Prepare and deliver trainings			BE
Team building			E
Executive coaching			E
Compensation system analysis			E
Identify consulting goals (measurable)			B
Measure progress of consulting goals			B

Organizational consultants both new to the field and experienced will possess some level of interpersonal and basic relationship skills. Diversity skills, however, are not given. SCP recently conducted an informal survey of its members and found that "the majority have very limited education, training or supervised practice in dealing with the cultural, racial, and ethnic issues that impinge on the delivery of effective organizational consulting psychology" (Cooper & Leong, 2008, p. 135).

The other competencies listed in ❯ Table 20.1, which are crucial over many phases of consulting, are knowledge of the consulting process, observational skills, and determining who is the client. Knowledge of the consulting process is important for the consultant to stay grounded in any particular stage while also seeing the larger picture. This knowledge is also imparted to the clients throughout the project to demystify the process and encourage collaboration. Whenever the consultant is physically with the client, the ability to assess and gather information through observation is vital to the success of any project. Finally, the concept of "client" in

consultation is more slippery than in clinical work. To practice effectively and ethically, the consultant must be able to keep track of the various types of clients being served and impacted at each stage of the consultation.

20.8.3 Basic or Expert?

To provide the reader a comprehensive sense of the many competencies required to engage in consultation, I listed all the competencies that were involved in my project with the architecture firm in ❯ Table 20.1. The division of basic and expert competencies in consultation is more art than science. Like the psychotherapy competency, most consulting practitioners take the "long view" that becoming truly proficient as a consultant is a lifelong effort. Of the 24 competencies listed, only eight (knowledge of consulting process, listening skills, contracting, knowing who is the client, developing assessment questions, survey construction and administration, identifying consulting goals, and measuring progress) could be defined at the basic level. Thirteen others (e.g., interviewing skills, observational skills) are learned at a basic level and enhanced with consultation experience. Indeed an argument could be made that all the competencies in ❯ Table 20.1 exist at the basic and expert level. Finally, team building, executive coaching, and compensation system analysis are types of consulting interventions that require more training and experience. The topic of expert competencies in consultation will be taken up in the next major section of this chapter.

20.8.4 Acquisition of Basic Competencies

Just as there is a lack of consensus about how to identify and define the basic competencies, there is no agreement or solid research about how to prepare clinical psychologists in training for the role of organizational consultant. I have had considerable success over the past 10 years teaching the basic competencies and will briefly outline the methods I have used.

Acquisition of the basic competencies starts in the classroom. Students are introduced to the practice of consultation through a combination of reading and in-class simulations. It is beyond the scope of this chapter to detail the readings available that help prepare psychologists in training to become competent in consultation. I adopt Schein's (1969, 1988) process consultation model and utilize a variety of other source materials from publications associated with APA Division 13 to works by other scholars and practitioners who write about consultation.

The key to learning the basic competencies is for the students to practice, practice, and practice. I create consulting scenarios and divide my classes into organizational clients and consultants. The clients are briefed about their roles and the primary issues of concern in their fictional organization. The student consultants work in teams and I coach them through the various phases of the consulting process. Usually, I will demonstrate the primary consulting competencies in each phase before beginning the simulation.

For example, the first meeting (sometimes called the exploratory meeting) between the consultant(s) and the members of an organization is a critical point in any consultation project. During this meeting, relationships are formed; a preliminary assessment and diagnosis takes place; the consultant decides to pursue the project or not and contracting begins. Many of the competencies listed in ❯ Table 20.1 come into play. In my class, I will lead an exploratory

meeting (with students as organization members) to demonstrate the basics required to have a successful outcome. Then, I allow the designated student consultants to lead such a meeting using a scenario I bring to class, often from my own consulting practice. Consultants are encouraged to call "time outs" and ask for supervision in the process, if they get stuck or I might intervene if I see course corrections that are necessary.

I have found that all the early stages of consultation can be practiced through this simulation method. One organizational scenario will usually require several 3 hour class periods to complete. I either rotate the consultant and client roles so that all the students have the chance to practice consulting competencies or, if time allows, retain the same consultants throughout and then run subsequent simulations in which other students have the opportunity to practice their skills. The phase of consulting which does not lend itself to this model is intervention. Students will work through the initial contact, entry, contracting, assessment (usually conducting interviews with organization members), feedback and diagnosis, and goals for change. They might make recommendations for types of interventions in their feedback to the client. As mentioned earlier, there are many types of consultation intervention, most of which require more advanced competencies.

In these simulations, if students have the chance to practice the competencies associated with each phase of consulting more than once, a dramatic increase in their confidence and skill level is evident.

The final component of my teaching approach involves a field project or placement. After the students have demonstrated a basic level of competency through classroom work, they form consulting "teams" and partner with a community organization to conduct a "live" consultation project. Nonprofit organizations are particularly eager for such partnerships. Competency levels improve rapidly when students are engaged in "real work." I supervise the teams typically from the classroom, not at the site itself. Through these field projects, key basic competencies such as interviewing skills, contracting, observation, and relationship skills and providing feedback are refined and enhanced.

20.9   Expert Competencies

There is no finite list of expert competencies in consultation. I will begin this section with another case study from my practice in which several are demonstrated. Like case example #1, aspects of the project will be modified for the sake of confidentiality and to add value to teaching.

20.9.1 Case Example #2

I was contacted by Paula, who owned several hotels and a variety of other businesses. She was referred to me by a mutual acquaintance. Paula suggested that we meet at my office and I agreed. In the meeting, she outlined a complex and sensitive situation at one of her hotel properties. The general manager, James, was having significant problems in his relationships with his managers and employees. Paula explained that she had hired James 6 months earlier because of his proven record of improving profitability of hotels that were having financial difficulties. The previous general manager was well liked and respected by the employees, had a collaborative (laid-back) management style, but after the events of 9–11 was unable to bring the hotel back to a positive revenue picture. Paula described a very "emotional" meeting in

which she met with all the employees and announced the change she was going to make bringing James in and the reasons why. She was complimentary of the outgoing general manager, but told the employees she was faced with the difficult choice of installing new leadership or selling the property.

When Paula and I spoke, James had been on the job for 6 months, and she reported that he had already made significant progress on the financial side of the business. Unfortunately his management style was diametrically opposite to the former general manager. She described James as intense, confrontational, and frequently critical of his managers and employees. Turnover and absenteeism were up 25% since his arrival. He was working 60–70 hour weeks (often sleeping at the hotel) and expected his managers to do the same. He had difficulty delegating and was inclined to micromanage employees who resented not being allowed to carry out their duties with autonomy. Finally, Paula had heard complaints that James favored white males and treated them with more respect than women and employees of color.

I asked Paula about the sources of her information. She told me she usually spent 1 day a week at that property and had an "open door" policy. She encouraged employees to drop in and talk to her. She said she wanted to continue to promote a "family" atmosphere and open communication even with the change in leadership. I asked Paula about her own supervision style with James and if she had confronted him with the feedback she was receiving. She replied that she tended to be a "hands off" boss. She had spoken to James several times but he either dismissed or minimized the complaints. He would remind her that she hired him because he had a different management style, that there are always growing pains when a new leader takes over, that the employees who were quitting would have been let go anyway due to poor performance, and that the hotel was making money again.

Paula had never hired a consultant before. She was not exactly sure what I could do or what she wanted to occur. Her desire to meet at my office and not the property was strategic. At this point, she did not want James or any hotel employees to know she was considering hiring an external consultant. As we sorted through the complex situation she presented, she was able to specify the initial goals. She wanted to retain James. She wanted to reduce turnover, absenteeism, and job dissatisfaction. She wanted to maintain some semblance of the family culture that had been a hallmark of this organization, since this hotel opened 8 years earlier. She wanted to make sure that the employees were treated fairly regardless of race or gender.

We spent the remainder of that first meeting discussing the next steps, the consulting process in general and negotiating the outline of a contract (which would be formalized at a later date). I was mindful of the nuances of this consultation project, which would require several more advanced and expert competencies:

- I was hearing only one perspective about the situation and would need to do further assessment.
- To address Paula's goals, I would want to spend considerable time with James which posed the question, "who is my client?"
- The owner was ambivalent about the desired organizational climate, wanting to keep the family atmosphere among her employees, while recognizing that James was making changes which were necessary to make the hotel profitable.
- Paula's open-door policy effectively created a triangle in communication in which James was usually bypassed.

- Would James be open to a consultation process?
- There were accusations of possible sexism and discrimination.

Altering the format used in case example #1, I will first outline the stages of consultation and then append a section on expert competencies.

The *initial contact* was made by Paula. In the meeting with Paula at my office, a *preliminary assessment* was carried out. *Contracting* began but would be finalized later in the process. I proposed to Paula that another assessment meeting occur on site which would include James. The primary function of this meeting would be to shut down yet another communication triangle, one that I was now part of with James and Paula. Other purposes of this next meeting would be to elicit James' perception of the matters at hand and to assess his level of "buy-in" to a consulting process in which he would be a key player. The meeting was set for the following week in Paula's office at the hotel.

I did meet with Paula and James the following week (*entry*, *preliminary assessment*, *contracting*). Paula and I began by telling James we had met once before and what we had discussed. I am promoting, in this step, transparency and no hidden agendas on Paula's part. I specifically asked Paula to repeat her concerns and then asked James to respond. At that point, I was assessing James' level of openness, defensiveness, and capacity to objectively assess his own strengths and weaknesses. I was generally encouraged in what I heard, as James admitted to making some mistakes with employees, and "welcomed" some outside intervention to assist him in examining his management style. He denied any awareness of treating particular groups of employees differently. The three of us drew up the first stage of a contract. I would have three 90 minute meetings with James in my office. The primary purpose of these meetings would be further *assessment* and relationship and trust building with James. After my meetings with James, a follow-up meeting with Paula would be scheduled to plan the next steps and sharpen the goals of consultation. I would provide no information to Paula until that time.

Before that meeting ended, I made a deliberate *intervention* with Paula. Although intervention can be seen as a discrete phase of a consultation project, in fact, the consultant is intervening at every stage. I suggested to Paula that during the next 2 weeks when I was meeting with James that she should not meet with the employees to hear their concerns. Instead, I encouraged her to counsel the employees to take their concerns directly to James (it is interesting that despite the size of this organization there was no formal HR director or position – an artifact of we are a family not a formal business culture).

James and I held our meetings. Near the end of the second meeting, he acknowledged that he had hoped to go through the motions with me to pacify his boss and that he neither saw any reason nor had the time to meet me. He thought he was doing exactly the job Paula hired him to do and did not appreciate her lack of support or open-door policy which allowed his "problem employees" to go over his head to "mommy." I saw that meeting as a breakthrough and absolutely vital, if the consultation process was going to move forward. James was being more honest about his attitudes and feelings. In our third meeting, he softened slightly and admitted that he was struggling in the relationship area with many of his employees. In his previous positions, his management style worked more effectively. He reluctantly agreed that perhaps he could make some slight modifications.

James, Paula, and I met again as planned. I provided *feedback* from all of the meetings to date. James spoke about his willingness to examine his management and interpersonal style, given the number of complaints and the increase in turnover and absenteeism. He also agreed to reevaluate whether his expectations of his employees and managers were realistic. I came to

that meeting with several intervention strategies which I was prepared to present contingent on the *goals to be set* and changes to be pursued.

The *interventions* that I carried out were:

- Ongoing weekly executive coaching with James, including "role plays" in which James practiced different styles of confrontation and communication with me playing the role of the employee.
- Homework assignments – again geared toward James trying out new behavior with employees.
- Two 360° feedback evaluations of James. One was carried out at the beginning of my work with James and another 16 weeks later to measure any changes that were occurring in his style and performance rating.
- Meetings with James and Paula, so we could all be present as James and I discussed the progress of our sessions.
- Meetings with James and Paula to discuss "cultural" issues and structural changes, including the formation of an executive committee to advise James and the creation of an HR position to shift that function from Paula.
- A referral of James to cultural competency training for managers.
- Facilitation of initial meetings of the executive committee to assist them to define their functions and areas of responsibility.

My work with this organization spanned 2 years. James remained as general manager. The hotel continued on a path of financial health. Turnover continued to be an issue for several months and then settled to industry-wide average levels. James was able to make some changes in his style, reluctantly at first, but more sincerely when he saw the results of a more positive work atmosphere. The culture of the organization did shift to a more formal business operation with a clearer hierarchy (Paula's door only opened if other steps had been taken first). I heard, however, that the yearly Christmas party at Paula's house continued to be a successful and family-like affair. Allegation of unfair or discriminatory behavior by James diminished markedly and was handled by the HR director (*evaluation and termination*).

20.9.2 Summary of Expert Competencies

I will begin by reiterating that there is no clear line which demarcates basic and expert consultation competencies. Rather, the vast majority of consultations can be conceptualized as existing on a continuum and becoming a master or an expert consultant is a lifetime process.

My work with Paula, James, and their organization did require that I perform at an expert level utilizing many advanced skills and competencies. In this section, I will attempt to name these competencies using the context of case study #2. In the early part of my involvement with this organization, I relied primarily on my basic assessment and relationship building skills. I asked a lot of questions, listened carefully, and advised Paula about the consulting process and on the initial steps to get us started. Once James entered the process, more advanced skills were called for.

I would call the first expert competency demonstrated in this case as *boundary management*. It was evident from the very first contact I had with Paula that individuals in the organization favored indirect communication to direct communication. James, in particular,

was frequently triangulated. Boundary management means that I attempted to clarify and support direct lines of communication while eliminating the "end run" method of expressing concerns and information. Another expert competency was the ongoing need to *manage multiple layers of organizational clients*. Paula was my sponsor (she was paying me) and a client. James was my primary client. Over the 2 years, I had contact with the majority of the hotel employees. For James to trust me and be open to my change initiatives, it was essential that the "rules" of what I would say about our meetings and to whom be absolutely clear. I would say to James, "Paula pays me. For this consulting project to succeed she must be aware of many of the things we discuss. I will only have those conversations, however, when you are in the room." If Paula would call me and ask how the coaching with James was going, I would politely tell her to ask James about that or to wait until our next scheduled meeting with the three of us. Boundary management and managing multiple layer of organizational clients are closely related competencies and functions.

The success of this project pivoted on developing an alliance with James. He was a reluctant client who was going through the motions of cooperating with my interventions while resenting his supervisor for calling me in and for doubting and questioning his management style. The expert competency required to form an alliance with James was *acknowledging*, *validating*, *and working with resistance*. In my early meetings with James, I was empathetic and sympathetic to the difficult position he was in, being required to meet with me and not being fully supported by Paula. At first, he denied any discomfort or resentment, but over the course of our three initial meetings, he admitted that he did not see that he needed any help or coaching.

Before meeting with James and Paula to provide feedback and facilitate a process in which goals could be set, I had a phone conversation with Paula. I did some *executive coaching* in this call with Paula. I advised her to use a portion of our meeting to point out to James his strengths and accomplishments to date. I knew that James would be much more responsive to a change initiative and more likely to admit to some problems in his management style, if the discussion among the three of us was balanced and included acknowledgement of his strengths.

Moving into the formal intervention phase of this project several more expert competencies were required.

- In my ongoing executive coaching with James, I used *directed role plays*. We would construct typical interpersonal situations he encountered at work, in which by his admission his approach failed or his goals were not met. First, I would play the employee. James would approach me in the way that was unsuccessful. Then, we would reverse roles and I would approach James (now in the role of the employee) with a different interpersonal style (e.g., more complimentary). James then had the opportunity to see how it felt to be approached in another manner. Then, James would try to adopt my approach and we would reenact the employee encounter one more time. In this last round, James was trying on a different management style to see how it fit. Sometimes, we would make modifications so that my proposed style could be better integrated into his existing style. Finally, I would assign homework and require that James try out the new approach at least once with an employee before our next coaching session.
- I conducted a *cultural competency assessment* with James. I attended, in particular, to the domains of awareness of self and others. The result of this assessment was that James had significant blind spots and frequently operated on stereotypic beliefs about women and

certain ethnic minority groups. I integrated this work into the executive coaching frame. Again the work was delicate in that James was, at first, unwilling to admit to weaknesses in this area. Eventually I was able to effect a referral to a series of cultural competency trainings for managers being conducted in the area. I advised Paula to pay for some percentage of the tuition but not all so that James was more likely to take some responsibility for his own professional growth around diversity issues.

- I convinced James that our executive coaching work would be enhanced and accelerated if we could access more information about his strengths and areas for improvement from his employees. This was a big step for James to take. The coaching alliance we had formed and his growing trust in me supported this step. I *conducted 360° evaluations* with 25 hotel employees using interviews, not surveys or focus groups. Paula, James, and I collaborated on identifying employees who would be representative of the entire hotel staff. I designed interview questions which would elicit both strengths and positives about his style and performance as well as concerns. I also asked questions about the degree to which any changes in James' style were evident, since I had begun coaching him.

- I also conducted a limited *program evaluation* and made two *program development* recommendations to James and Paula. The first involved creating a new position for a human relations specialist. Throughout the hotel's history, the function was never formalized and Paula was the usual point person when HR-type issues arose. My rationale for this proposal was that the roles and responsibilities of employees (including job descriptions) required more individuation and clarity. Paula's "family" culture had advantages but also resulted in a kind of enmeshment in which employees would bring employment concerns to individuals who did not have the authority or "rule book" to take action. The second was the creation and development of an executive committee. This group of managers would serve in an advisory capacity to James and meet once a week. James had an "ad hoc" style of meeting with his managers. He met with some on a regular but not scheduled basis. Other managers (ones he perceived to not support him) he only met when there was a critical incident which he needed to sort out with that manager. Also, when he did meet with his managers, it was typically "on the run" or he would summon them to his office. In these meetings, James would talk and they would listen. With some of the feedback I obtained in the 360° evaluations, I realized that a weekly staff meeting would be an important shift for James. He would have the opportunity to interact with all of his managers once a week and could demonstrate a willingness to listen more and talk less.

- Setting up an executive committee is relatively easy; making it work is another matter. Again James was nervous and hesitant about the creation of a formal committee like this. He was concerned about losing power and authority and about losing control of the meeting if his managers "ganged up on him." The expert competencies I employed at this stage were *group leadership training* and *management team development*. Before the first executive committee meeting, I coached James about how to lead this group and how to facilitate a meeting which would foster input while demonstrating and modeling that he was still the boss. Then I attended the first three meetings as an "advisor to the team's development." Being in the room allowed me to monitor James as he attempted to shift his style to be more open to input and more empathetic to the challenges voiced by his managers. I also supported the entire group as they got more accustomed to this new method of communicating and seeing James in a different light.

20.9.3 Final Comments on Expert Competencies

Every consultation process is different. The basic competencies listed and illustrated earlier in this chapter will be required in almost every consulting project a psychologist undertakes. Some consultation projects are, however, more complex than others and call out for more advanced and expert skills. Case study #2 was such a project. There is no set number of expert competencies. Particularly at the intervention stage, a wide variety of competencies are necessary for the psychologist/consultant to practice effectively. Similar to clinical work, the key is for psychologists to know and practice within the limits of their current competency level.

20.9.4 Acquisition of Expert Competencies

Basic consultation competencies are learned through a combination of classroom work and supervised field placement. Acquisition of expert consultation competencies occurs over the course of many years through continuing education (workshops, extended trainings, and post-doctoral fellowships), mentorship and supervision, and through hours and hours of experience with a wide variety of organizational contact.

One path taken by many clinical psychologists who engage in consultation work with organizations is to become an expert in a particular type of intervention, for example multicultural OD or team building. The advantage of this approach is the ability to sharpen your skill set in a particular kind of intervention. The downside is that the field of potential clients may be narrowed by the consultant's move to be more a specialist than a generalist. On this path, psychologists may be functioning more in a training role than a consultant role unless they were involved in the earlier phases of the process to identify the concerns that the interventions are designed to address.

The more traveled route to gaining competency in consultation is first learning the basics of the entire consulting process from initial contact to evaluation and termination. Almost all the basic competencies blossom into expert ones with time, experience, and good supervision.

20.10 Summary

The field of clinical psychology is in the midst of a quiet revolution. Psychologists, both in practice and training, are expanding their roles to provide a wider array of services including consultation to organizations. The profession is also moving toward a competence model.

In this chapter, I have outlined the basic competencies and some of the expert competencies required for psychologists who provide consultation services to organizations. I made the case that psychologists are uniquely positioned to offer these services because of our understanding of human behavior, interpersonal relationships, group dynamics, and because we operate with existing codes of ethics and multicultural guidelines. Psychologists can transpose relatively easily from the key of clinical to the key of consulting because of the similarity in the stages of both kinds of work and the overlap of many of the competencies required to be a good clinician and a good consultant.

Although as a field we are moving briskly toward a competency-based model of training, the identification, definition, and measurement of consulting competencies is a work in progress. The SCP, APA's Division 13, has made significant progress in this regard with its recent publication of principles for education and training. None the less there is a substantial amount of work ahead to come to anywhere near a consensus on questions such as "What are the basic competencies?", "How do we train psychologists to attain basic competency?", and "How do we measure consultation competency?"

Through the use of two case examples, I identified and defined a set of basic and expert consultation competencies using a stage model to illustrate when these competencies would come into play in a consulting project. I stated that although there are a few competencies that could be seen as basic or expert, most consultation skills are learned and mastered first at a basic level and later refined and enhanced to be more advanced through hours of work experience, continuing education, and supervision and mentoring. There are particular competencies like relationship and diversity skills which permeate every stage of a consulting process. There are other more esoteric competencies which would require a psychologist to seek specialized training and supervision to master.

Traditionally psychologists have focused on providing clinical services to individuals. These individuals on average spend almost one third of their time in work organizations. It is only natural that clinical psychologists would consider bringing their ample knowledge and competence to those individuals in those organizations.

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21 Teaching

Bethany C. Johnson · David DiLillo · Calvin P. Garbin

Abstract: Teaching is an important component of most academic clinicians' responsibilities, but it often receives the least attention during graduate training. This chapter describes basic and expert competencies underlying teaching at the both the undergraduate and graduate levels. The underlying premise of the chapter is that teaching competence is comprised of fundamental and advanced skills that can be learned, practiced, and mastered. The majority of the work that goes into teaching happens outside of the classroom, and starts with careful course planning. The skills and behaviors necessary for competent teaching—from classroom management to lesson planning and assessment—should be based on explicit educational objectives and goals. Expert teachers not only integrate pedagogy and content knowledge to implement strategies that are more sophisticated than those used by teachers with basic competence, they also incorporate more complex innovations and interventions into their teaching. Instructors at all levels of competence should include systematic reflection and assessment of the efficacy of their teaching in their normal repertoire of skills. As they gain experience and skill, teachers can take a more experimental approach to improving their instructional approach. By applying a scholarly approach to teaching, academic clinicians can more efficiently improve the quality of instruction based on the empirical evidence of learning outcomes. This chapter can be used as a reference for new teachers just beginning their careers, or by experienced teachers looking to improve their methods.

21.1   Overview

Academic clinical psychologists have multiple roles to play professionally. They must produce meaningful research, engage in service, and, in many cases, teach. Each component of this set of responsibilities does not always get equal attention during training for many newly minted clinicians. However, all four areas of proficiency are integral to the well-rounded professional clinician's arsenal. This handbook addresses the gamut of professional competencies necessary for modern clinical psychologists; our chapter will address the particular standards and strategies needed to become a competent teacher of psychology.

   Competency, in the context of teaching, is an amorphous concept. Some authors claim that a good teacher is one who has a lasting, positive, and significant effect on students' thoughts, behaviors, and values (Bain, 2004). Others argue that a good teacher is one whose unique configuration of personality characteristics and intellectual ability best lends itself to instruction (Lucas & Murray, 2002). Is a competent teacher a good teacher? To make such an assumption, one must equate *good* with *competent*, which falsely likens a subjective evaluation to a quantifiable set of skills and outcomes. Experienced teachers may employ widely divergent teaching methods and strategies, and each may vehemently assert that his or her way is the best and most effective. Nonetheless, there is a difference between the philosophical underpinnings of a methodological approach, and the quantitative merits of solid pedagogy. There is no single best way to teach well; there is, however, a solid foundation of

theoretical principles and empirical evidence, the understanding of which is necessary for every teacher to develop, in his or her own way, into a competent teacher (Lucas & Murray; McKeachie, 2002).

This chapter distinguishes between basic and expert competencies. Basic does not mean simple or easy to achieve; instead, basic competency is comprised of the fundamental skills every teacher should master as a matter of course. These skills and strategies are those necessary to begin on the developmental trajectory toward expert teaching competency. These pedagogical building blocks are necessary regardless of the subject matter being taught, and are applicable to many personal teaching styles. The standards of basic competency for psychology teachers described in this chapter are based on research and theory from the scholarship of teaching and learning. Teachers who have basic competencies should systematically reflect on their teaching; they should be purposeful in their use of specific methods, monitor learning outcomes, and adjust their approach to meet their particular objectives.

Expert competency is directly dependent on basic competency. Expert teachers integrate and generalize basic methods more fully to maximize their efficiency and effectiveness. An advanced technique is one that utilizes more sophisticated tools, or is applied to more complex situations. An expert teacher is committed to gaining a better understanding and integration of both his/her subject matter and the principles of teaching and learning. Expert teachers engage in more sophisticated analysis of their students' learning, and incorporate experimental interventions or teaching innovations into their courses.

The intended audience for this chapter is academic clinical psychologists or students who will be teaching at both the graduate and undergraduate levels. In addition to their standard clinical training and supervision duties, faculty are often called upon to teach core clinical classes at the graduate level (e.g., psychopathology) as well as courses within their particular areas of specialty. It is also common for clinical faculty to teach courses at the undergraduate level, ranging from introduction to psychology to abnormal psychology to statistics. For this reason, the information contained herein will emphasize aspects of teaching and learning that are equally relevant to any course level. Throughout the chapter, we will highlight the topics and applications that are more specifically applicable to one level over another.

In today's academe, there is a growing diversity in course styles and formats. In order to accommodate the needs of modern students, online courses, distance education, and hybrid styles are increasingly common. However, an in-depth examination of those variants is beyond the scope of this chapter (Duffy & Kirkley, 2004). Though we will address course style and format where appropriate, the primary focus of this chapter is on issues related to traditional "brick and mortar" classroom teaching. The skills and strategies that comprise the foundation of good pedagogy are applicable to any kind of course in most cases; nonetheless, the most parsimonious presentation of this information is as it pertains to the "default" classroom.

We trust that readers will use this chapter as a tool to aid in their own teaching. Accordingly, the chapter is organized to facilitate quick reference. Thus, within the broadest headings of basic and expert competencies, we have further divided the information into three discrete subsections. The bulk of the work required to teach happens before the instructor ever steps foot in the classroom; therefore, the first section details *preparation that takes place outside of the classroom*. The second section of both competency categories pertains to *skills and strategies for use in the classroom*. Finally, we present the *tools and methods for teaching assessment and professional development* last in both categories. This section addresses the necessity of reflective and systematic analysis of teaching and learning, and presents the ways teachers incorporate

teaching into their personal career paths. Within these subsections, we provide theoretical background for the principles, followed by empirical research to illustrate its utility in teaching. Where applicable, examples of practical applications for each principle are presented. We intend for this structure to reinforce our commitment to making this chapter useful and convenient as a reference for professional psychologists.

21.2 Basic Competencies

Many graduate programs give short shrift to the teaching aspect of the graduates' overall training as academic psychologists (Boice, 1992; Gibson, 1992; Lucas & Murray, 2002; Vesilind, 2000). For this reason, some doctoral-level clinicians begin their academic careers with little else than a rudimentary understanding of what to do once they find themselves in a teaching role. As a result, new instructors quite often default to replicating the way they were taught, and equate good content with good teaching (Boice; Lucas & Murray). This produces a cyclical pattern of the reiteration of unintentional teaching methods, to the point that those methods become tradition. There is a sense that teaching, as part of the triumvirate of academic roles including research and service, is a self-directed and often burdensome endeavor, which derives more from art than science (Boice; Lucas & Murray). However, this perspective is changing in academia, as a new generation of researchers begins to apply the same kind of effort and empiricism toward their teaching as has been given to their specialties. The result of this shift is the increasingly widespread attitude that teaching can be done in accordance with the principles governing human behavior, cognition, and emotions that psychologists have been investigating for a century. It is in that spirit that this chapter synthesizes theory with research and practical applications of teaching principles. In the following sections, we suggest the fundamental skills that teachers in psychology need to master to achieve basic competency. We will present this information in the recommended order of operation, starting with the first steps in course planning.

21.2.1 Outside the Classroom

The majority of the work required for teaching happens outside of the classroom. Before an instructor ever meets a student, he or she must have put careful thought and purpose into planning and designing the course. Course planning begins by considering the big picture. Some of the essential decisions involved in course planning may appear to be self-evident. However, because they are so obvious, inexperienced teachers sometimes overlook key elements required to put together a course (e.g., visiting the classroom early to account for specific physical and technological logistics) (Lucas & Murray, 2002). The first portion of this section describes the first steps a teacher must take when beginning a new course. The course planning process should begin about 3 months before the class begins (McKeachie, 2002).

21.2.1.1 Course Planning

Academic clinicians are often called upon to teach both graduate and undergraduate courses. These courses are sometimes established parts of a department's curriculum, while at other

times, they may be new. The first order of business when planning a new course is to determine about what the course will be. This is one of those decisions that seems patently obvious; however, neglecting this step can derail many aspects of the rest of the planning. By explicating the precise subject matter of the course, the instructor focuses his or her attention on what is important and necessary to include. For example, a research methods course may or may not incorporate instruction about the use and interpretation of inferential statistics. If the course is an existing part of a department's curriculum, the new instructor should collect syllabi and course materials from those who previously taught the course (Lucas & Murray, 2002).

Such information is not prescriptive; however, in most cases, the teacher is not bound to replicate the course exactly. Nevertheless, it behooves the new teacher of an existing course to be aware of the role the course plays in the department and the school's overarching objectives (Lucas & Murray, 2002).

Once the specific topic of the course has been identified, the instructor should elucidate his or her general instructional goals and learning objectives for the course. Instructional goals are broad, global statements of the purpose of the course, from the teacher's perspective (Lucas & Murray, 2002). These objectives summarize what the teacher hopes to accomplish with the course. For example, an instructional goal for an undergraduate course may be for students to gain an expansive and general understanding of the variety of areas of research and theory included in social psychology, or, at the graduate level, for students to learn the range of treatments available for different types of anxiety in children. General instructional goals pertain to content knowledge, whereas learning objectives are more specific, action-oriented skills (Lucas & Murray; McKeachie, 2002). Examples of learning objectives include improving critical thinking, increasing synthesis of disparate ideas, and enhancing analytical writing skills related to the course topic. These objectives are conceptualized from the students' perspective as a statement of what they should be able to do once they complete the course. These outcomes are sometimes referred to as performance- or competency-based learning (Lucas & Murray; McKeachie). Learning objectives should be relevant to students' development outside of the specific content area covered by a single course. Vesilind (2000) suggests categorizing desired outcomes into concepts, skills, processes, or attitudes when planning learning objectives.

Instructors should conceptualize learning objectives in terms of achieving different levels of knowledge (Lucas & Murray, 2002). Taxonomies of learning describe different types of knowledge and understanding toward which teachers can strive, which then inform decisions about how to approach instruction. Bloom, Engelhart, Furst, Hill, & Krathwohl's (1956) taxonomy of educational objectives is the seminal classification system used by educators. Over the years, other scholars have revised and updated Bloom et al.'s original taxonomy, and many new frameworks have been proposed (Anderson & Krathwohl, 2001; Marzano & Kendall, 2007); however, the basic premise remains unchanged. The taxonomy classifies and hierarchically arranges different levels of learning. At the lowest levels are the simplest, most superficial types of learning (e.g., memorization of jargon and facts). Higher levels build upon the lower ones and involve more complex and sophisticated types of learning (e.g., procedural knowledge and applications).

Anderson and Krathwohl (2001) have updated Bloom et al.'s (1956) classic taxonomy to form a model with two dimensions, each with multiple levels. The first dimension consists of the original, cumulative categories of knowledge. Along this dimension, the first level is factual knowledge, which is comprised of basic information and simple definitions of a particular discipline, which allows students to solve simple problems and use terminology properly. The second level contains conceptual knowledge, which manifests in a deeper understanding of the

relationship between elements, including theoretical and structural explanations for more generalized topics. The third level is procedural knowledge, which enables students to apply techniques and algorithms to practical examples, including knowing when to use different procedures or methods. The last level is metacognitive knowledge, which is expressed as "thinking about thinking," that is, knowing not only the content of an area, but how one goes about getting and using that knowledge. Anderson and Krathwohl's second dimension catalogues the cognitive processes possible within the different learning objectives and is also structured hierarchically. The simplest process is remembering. Next is understanding, followed by application. Beyond that is analysis, then evaluation, and finally, the most complex process is creation.

Whichever taxonomical organization of learning objectives an instructor chooses to utilize, it is important to match the design of the course to the desired learning goals. Each type of learning described in such taxonomies is suited to different course components (e.g., discussion, writing assignments, etc.). Given prevalence of lecture-based courses at the undergraduate level, it is easy for new teachers to concentrate their efforts on this approach to classroom instruction (Boice, 1992; Lucas & Murray, 2002). Indeed, good lecturing requires a great deal of skill and preparation, and can be useful for presenting factual material, stimulating interest in topics, summarizing disparate sources, and explaining basic terms and definitions (Zakrajsek, 1998). Though lecturing is an efficient way to deliver large amounts of information to large audiences, it is not necessarily the most conducive to learning at the uppermost levels of the taxonomy (Vesilind, 2000). Other course components can be used to achieve these objectives. In-class activities, such as problem-solving exercises or demonstrations, require students to assimilate and apply knowledge to novel situations, using factual, conceptual, and procedural knowledge (Anderson & Krathwohl, 2001). For example, classroom discussion of reading assignments requires students to read ahead and think about the topic more deeply than they would if the students were not going to have to ask or answer questions about the assignments in class. This type of skill requires both factual and conceptual knowledge, and involves remembering, understanding, and applying recently acquired information (Anderson & Krathwohl). Depending on the objective of the discussion, students may also incorporate analysis and evaluation. Discussions are particularly useful for connecting personal experiences to course content, explaining and evaluating opinions and positions, and solve problems (Kramer & Horn, 1996).

As more empirical evidence becomes available about the benefits of matching teaching methods to desired learning outcomes, teaching styles are shifting away from the "sage on the stage" approach toward learner-centered methods in which the student assumes some responsibility for structuring the class content (Messino, Gaither, Bott, & Ritchey, 2007; Miserandino, 1999). Learner-centered pedagogy emphasizes the student's needs, experiences, and preferences as they pertain to motivation and knowledge structures (Wisher, 2004). The American Psychological Association (APA) has published a list of principles to guide learner-centered teaching (APA, 1993). Included in these principles are ways to move beyond basic didactic teaching methods and incorporate varied, active, and higher-level techniques to improve students' ability to construct and share knowledge while engaging in social interactions with their peers and teachers (Wisher). Teachers are less focused on choosing one style or method over another in favor of combining approaches to achieve multiple learning objectives simultaneously. An example of this type of hybridization is a large introductory-level course in which the instructor includes lecturing, small group activities, discussion, practicing application problems, and writing – utilizing some or all of those methods within the same class period.

This diversification requires students to process the information they received in class on several different taxonomical levels. This approach to teaching is sometimes referred to as "guide on the side," in contrast to "talk and chalk" lecturing (Lucas & Murray, 2002; Messino et al.). Instructors should make decisions about what kinds of components they want to include based on both their instructional goals and their learning objectives for the course (McKeachie, 2002). Furthermore, these should dovetail with the department and the institution's goals and objectives; besides asking colleagues and administrators, a good place to look for this information is in the school or department's mission statements (Lucas & Murray).

Syllabus Planning. Once the instructor has made the major decisions about the structure and objectives of the course, the next order of business is developing the syllabus. The syllabus serves several different purposes and can itself be a useful course planning tool (Appleby, 1999). First, the syllabus is a statement of all the basic information about a course, from where and when it meets to its objectives and goals, required materials, and course components and policies (McKeachie, 2002). As such, the syllabus is the first exposure students have to the instructor's pedagogical philosophy, personality, and style (Appleby). The syllabus should serve as a centralized source of answers to any major questions (i.e., an FAQ) students might have about the course (Lucas & Murray, 2002). Furthermore, the act of delineating all the course policies related to issues like absences, grade disputes, late assignments, and academic dishonesty requires the teacher to have thought through the reasoning behind and enforcement of those policies ahead of time (Lucas & Murray; McKeachie). Planning ahead for questions and problems ensures that policy decisions and consequences are consistent and fair, which is less likely if decisions are made on the spot or are influenced by the teacher's feelings toward particular students (Whitley, Perkins, Balogh, Keith-Spiegel, & Wittig, 2004). The instructor should ensure that listed policies are consistent with institution-wide and departmental policies. Ultimately, the syllabus can be viewed as a contract between the students and the instructor, explaining what is expected and required of both parties, and serving as official documentation of rules and regulations (Appleby; Lucas & Murray; McKeachie; Whitley et al., 2004). The syllabi from various courses represent the teacher's growth and professional development over time as well, which is useful for both the teacher's personal reflection and departmental oversight (Appleby).

Another important aspect of the syllabus is the class schedule. Writing out the schedule of topics and assignments on the syllabus forces the instructors to quantify their instructional goals in the context of time constraints for the semester (McKeachie, 2002). Purposeful scheduling requires that the teacher thinks critically about how much time to spend on each topic. The course schedule directly influences how much time the students and teacher should expect to spend on the course. A general rule is that students should plan to spend 1 or 2 h studying outside of class for every hour spent in class (McKeachie). This apportioning also allows an instructor to estimate realistically how much material he or she will be able to cover and evaluate in the time available. New teachers may inadvertently assign more reading than is reasonable to complete in the given time frame, which may necessitate either postponing coverage of the excess material to the next class meeting or disregarding it entirely. This practice can be very stressful for both students and teachers, especially if it affects the schedule for the remainder of the course (McKeachie). Teachers should include a disclaimer that the schedule may change, just in case (Lucas & Murray, 2002; Whitley, et al., 2004). Keeping this caution in mind, the teacher can think of the syllabus as the blueprint for a course, and use it to guide subsequent planning.

Textbook Selection. Preparation of a syllabus also necessitates selection of the text or other reading materials for the course. Choosing a textbook can be a daunting process, because there

are so many factors to consider. As textbooks proliferate, and publishing companies' sales representatives get pushy, it can be tempting to pick a text for arbitrary reasons (McKeachie, 2002). The text for a course should match the students' abilities and the instructional goals for the class. Rather than skimming through whole books superficially, instructors should choose two chapters to read closely: one in the teacher's area of expertise, and the other over a less familiar topic. This strategy allows the teacher to evaluate and compare the difficulty level, comprehensiveness, inherent interest, and educational objective levels the book achieves (McKeachie). One way to capitalize on the increasingly competitive publisher representatives' advances is to request the ancillary materials that come with the sample textbooks they are pushing. Accessories often include comprehensive instructor's resource manuals, premade lecture slides, test-item books or software, DVDs with collected video clips, and access to feature-packed online textbook companion Web sites. Even if the teacher does not choose that particular text, those materials are valuable (and usually free) accessories for lesson planning. Many teachers choose instead to assemble their own material from original sources (e.g., journal articles) or create their own course packet, particularly for upper-level undergraduate or graduate-level courses. Collecting an original set of readings is a good way to tailor class materials to specific needs; however, this is a time- and work-intensive process, because then the responsibility for synthesis and organization is placed entirely on the teacher's shoulders (McKeachie).

Technology Decisions. Traditionally, teachers had few choices when it came to technology. Where classrooms used to have overhead projectors, there are now fully integrated audio/visual presentation systems. Where grades used to be recorded in paper grade books, there are now institutionally supplied, network-hosted classroom management systems (e.g., BlackBoard). The newest trends include things like podcasting, asynchronous online discussions, usage-tracking statistics, and automatically administered, graded, and recorded exams. It is easy for teachers to be both seduced and overwhelmed by the technological options available. However, technological advances are best seen as tools to increase efficiency and aid in achieving instructional objectives, rather than toys to be used for their own sake (Sargent Mester, 2008). Teachers who are adding new technology to their courses might be afraid of inevitable technological difficulties, loss of control over students, and inability to achieve the same objectives they can using more traditional methods (Brink, 2004). Brink suggests that if teachers are willing to put time into learning how systems work, talking with colleagues about their experiences incorporating new tools, and accepting the inevitability of setbacks in the natural course of things, they can harness amazing power from new classroom technology. Brink also suggests that it can be fun to do so, as long as the teacher goes in with a positive attitude.

As with any other course components, different technologies are appropriate for different kinds of learning and instructional goals. For example, presentation software (i.e., Microsoft's PowerPoint) can add much to a class when used to augment what the instructor is saying (Sargent Mester, 2008). However, the excitement of possibilities raised by presentation software sometimes leads instructors to overdo their visual aid. As a rule, simplicity and brevity are the watchwords for slide content. A picture can stand in for a lengthy explanation, and key words or short bullet points may highlight important parts of the lesson (Vesilind, 2000). However, students are easily overwhelmed, either by trying to scribble down every word on a slide, or by overstimulation due to superfluous bells and whistles (Sargent Mester). Instructors should not only be able to operate their classroom technology and software properly, they should also familiarize themselves with the tips and tricks of good presentations before they become too invested in implementing technology into their courses (Brink, 2004; Vesilind). Oftentimes,

schools offer courses to faculty and staff, for free or at reduced rates, to learn how to use a wide variety of common software applications such as PowerPoint.

Course Logistics. Size of the enrollment and the venue are two physical features of classes that have a major impact on the manifestations of course goals and objectives. Class size is important because some course components and instructional strategies depend on the instructor's ability to reasonably manage the workload. For example, introductory classes with large enrollments often use multiple choice or other objective testing formats so that students can record their answers on bubble sheets, which are then machine graded. In most cases, instructors would not be able to grade subjective tests (e.g., essay tests) for large groups of students because of the time required to do so. Another example of a size-dependent course component is class discussion. In a large class, discussion meant to include the whole class leaves most students sitting silently while a few individuals dominate the discussion. A smaller class size allows more chances for students to contribute to discussion and lessens their ability to blend into the background and remain anonymous.

Research on the effect of class size on learning suggests that instructors' and students' emotional reactions to large classes are not supported by empirical evidence of learning outcomes (Hilton, 1999; Jenkins, 1991). Teachers, in particular, tend to have a negative response to the idea of large courses, though for meeting traditional, didactic course goals, large classes are very effective. Students, on the other hand, tend to feel more positive about large courses, especially in lower-level survey courses (Jenkins). In large-enrollment courses, the quality of instruction can have exponentially greater ramifications than in smaller, more casual classes. The sheer number of students can compound the negative consequences of poor preparation, ineffective methods, unsatisfactory materials, and unsophisticated testing methods. Conversely, large classes allow the few, highly skilled instructors in a department to influence more students (Jenkins). New instructors should be warned that good preparation and organization for teaching large courses is more critical than they might anticipate, and they should expect it to take a lot of time (Hilton).

Planning for the Time Commitment. Multiple sources recount the tendency for new academicians to become consumed with teaching, at the expense of their other departmental and scholarly responsibilities (Boice, 1992; Gibson, 1992; King, 2004; Lucas & Murray, 2002). The demands of teaching increase as class sizes grow and teachers add more courses to their plate. This overbalancing of teaching versus other work risks early burnout, and can stall academics' careers as they take time away from research and service to teach (King). In order to avoid teaching overload, instructors should make an effort to connect with their colleagues, turn down offers for new obligations when possible, and protect personal and writing time. One way for new teachers to manage their teaching load is to audit the time they spend during the workday. It might surprise a new instructor how much time he or she actually spends preparing lesson plans or grading assignments, and knowledge of the problem is the first step to solving it (Boice; King). Boice suggests spending 2 h in preparation for every hour of class.

Amount of time the instructor spends on a class varies based on several different facets of the course. The instructor's teaching responsibilities include course planning, lesson planning (including finding and reading materials to incorporate into class), the time actually spent in class, grading tests and assignments, and time spent with students outside of class (i.e., office hours or individual conferences, answering e-mails, etc.). There are hidden time-consumers within each of those categories as well. For example, in addition to the actual time it takes to evaluate each student's work, grading assignments also includes the time it takes to formulate

the grading rubric, configure the grade book (whether using an online system such as BlackBoard or making one using a spreadsheet program), and enter the grades. One way instructors can reduce this time commitment is to have students assume some responsibility for their own assessment. This can take the form of peer grading, peer discussion leaders, or peer forum moderators, among other methods. Any task that the instructor can delegate to students has the potential to be an additional learning opportunity, especially concerning non-content-related skills such as critical thinking and constructive criticism, while also lessening the time burden for the instructor. Because it is easy to be mired in the minutiae of planning and administrative tasks, the teacher should begin by deciding how much time he or she can afford to spend on teaching-related work and tailor the course to meet those projections, so teaching does not consume more time than it truly requires (King, 2004).

Lesson Planning. The final step of preparation that happens outside of the classroom is lesson planning. Because class time is the focus of teaching from the students' perspective, it might seem as though lesson planning should happen sooner in the process, or be prioritized higher than some of the previous steps described above. However, lesson planning is the culmination of all the preceding decisions. The learning goals, instructional objectives, course policies, technology use, logistics of the course, schedule, and time considerations all shape how class time is spent. Instructors' use of class time should also be guided by a set of principles of motivation and learning. Many teachers employ methods or techniques that work, but much of the time, those methods are arrived at via trial and error. A haphazard approach is inefficient though. Rather, it makes sense to draw on principles of active learning and motivation when choosing instructional methods. The current zeitgeist in higher education touts the benefits of active learning (Miserandino, 1999). In contrast to passive learning in which the instructor collects, organizes, and presents the content to the students, who listen and memorize the material, active learning approaches transform the classroom into a learning environment that allows students to engage with course content through problem-solving exercises, informal small groups, demonstrations and simulations, and other activities, with the focus on application (Gibson, 1992; Johnson, Johnson, & Smith, 1991). Active learning, sometimes called "discovery learning," allows students to reflect, evaluate, synthesize, and communicate information with their classmates, because the student is responsible for being intrinsically interested in and actively participating in structuring the content (Leonard, 2002; Machmer & Crawford, 2007). Students who are actively engaged with the material have to process it more deeply than those who are merely listening, and the instructor is not the sole source of information (Leonard).

One common active learning method is having students work in small groups within the class, discussing questions or solving problems. When teachers split their classes into small groups, they limit the time students are receiving direct instruction from the teacher. However, active learning techniques and strategies that refocus or increase students' attention and interest are a valuable antidote to passivity. Another useful active learning technique is the inclusion of demonstrations in class. Demonstrations serve to break up class time, and the change in pace allows students to refocus their attention and increase their interest (Bernstein, 1999). Some demonstrations may require elaborate materials and setup, and could take the entire period. Others may be quick interludes that take mere minutes, and yet serve as valuable illustrations and examples.

Just as it is useful to incorporate principles of active learning, so too should instructors consider the factors that motivate improved student performance. The expectancy-value theory

of motivation, for example, explains students' efforts from a social-cognitive perspective (Snowman & Biehler, 2002). According to this theory, individuals are motivated to continue doing something in which they have a reasonable expectation for success, and when they know the value of the task to their personal goals. Both conditions are necessary for students to continue to be motivated to complete a task (McKeachie, 2002). Instructors can take advantage of this system merely by being transparent with students about the purpose of assignments and the relevance to the overall course goals (Boice, 1992). Motivation also encompasses students' choice, effort, and persistence (McKeachie). Thus, when students feel as if they have some control over their grade, they are more motivated to comply with course requirements (Burke, 2008). Instructors can use this tendency to increase students' compliance with expectations. For example, Burke recounts a way he improved attendance in an undergraduate course from 70% to 90%. He told the students that those who missed fewer than five classes over the semester did not have to take a cumulative final. Conversely, those who missed five or more classes had to take *and pass* the cumulative final in order to pass the class. He contends that students felt like they had the power to choose to not take the final through their behavior, and that motivated them to attend class consistently (Burke).

Teaching Assistant Management. In schools with graduate programs, graduate teaching assistants (TAs) can be immensely helpful in increasing efficiency by handling administrative tasks associated with the course, such as grading objective assignments, entering grades, holding office hours, and responding to e-mail inquiries. Although TAs can be helpful, there are many elements involved in TA management that must be considered. In general, TAs learn how to fulfill their responsibilities through direct experience, by observing the supervising instructor, and via mentorship (Komarrajou, 2008). Some graduate programs leave TAs to learn by trial and error, but if an instructor institutes an apprenticeship model instead, not only do TAs build more confidence and retain enjoyment of teaching, but they also become more successful teachers in the future (Komarrajou). For example, TAs must know all course policies and objectives, so the instructor might include the TA in elements of course planning. This enables the instructor and the TA to present a united and coordinated front, so that students do not receive mixed messages or attempt to take advantage of inconsistent information. Furthermore, it is important that the instructor endows the TA with the appropriate amount of authority, so that students respect and trust the TA with their grades.

Communication of feedback and support for the TA is critical as well (Komarrajou, 2008). In this context, support means two things. First, the instructor should make an effort to be a conscientious mentor to the TA by setting a good example of professional behavior, and being transparent about the reasoning behind decisions and strategies. For example, an instructor might copy the TA on an e-mail response to an upset student, as a way to model an appropriate way of handling provocative or troublesome situations. Doing so not only allows the TA to be part of the official documentation of the interchange, but also provides a template for the TA to use for similar situations in the future. Second, whenever possible, instructors should support the TA's decisions. This condition is predicated on the TA being fully informed of the instructor's standards and preferences. When an instructor overrules an assistant's decision, the instructor risks stripping the TA of his or her authority; it communicates that the students do not need to take the TA seriously. This risk is why it is so important for the TA and the instructor to be clear about the course policies, consequences, procedures, and priorities from the very beginning.

21.2.2 In the Classroom

Once planning and preparation are finished, the instructor is ready to step into the classroom. Common wisdom suggests that the earliest interactions between the teacher and the students shape much of what follows throughout the semester. Indeed, many writings emphasize that the first day of class is the most important day for the teacher to establish his or her role as the authority, the tone of the class, his or her professional boundaries, and approach to teaching (Henslee, Burgess, & Buskist, 2006; Perlman & McCann, 2004; Vesilind, 2000).

Self-presentation should reflect the tone the teacher desires for the class. Young instructors should be especially mindful of this because their age may not easily distinguish them from their students. Depending on the teacher's personality and style, he or she may promote a casual or more formal atmosphere for the class, which is conveyed in part through the teacher's movement around the room, use of humor, manner of presenting course policies, and adherence to the schedule. If the instructor makes a point of being sensitive to impropriety, it will reduce the likelihood of inappropriate interactions in the classroom and foster comfortable discussion. For example, one way the tone of the class manifests might be students' inclusion of slang or expletives in discussion with the teacher or other students. Some instructors may not personally mind if students use such language in class; however, it is important to consider the opinions and preferences of the other students who may be alienated by some words. In most cases, less experienced teachers should err on the side of conservatism when it comes to tone.

It can be tempting on the first day of class to merely distribute the syllabus and then adjourn; however, that strategy might communicate to students that class time is not particularly structured or important (Perlman & McCann, 2004). McKeachie (2002) recommends that the first day includes introductions and presentation of the syllabus, but also that the instructor begins covering content and keeps the class the full time period. Henslee et al. (2006) report that students, on the other hand, do not appreciate delving straight into content unless the course has been clearly and thoroughly introduced first. One of the best ways to convey authority and competence is to be forthright with students about the reasoning behind the design of the course and use of different course components. Especially on the first day, transparency about class policy and pedagogical decisions communicates that the teacher respects the students and intends to treat them as adults.

Norms of behavior in the classroom vary by instructor and course. Students in small seminar courses may sit with their desks in a circle and speak without waiting for the instructor to call on them. Students in a large introductory-level course may keep their headphones on or have a crossword on their desk because they are invisible to the instructor. One instructor may have students respond to each other in discussion, whereas another instructor may ask all the questions and then solicit answers from the students. These kinds of differences are all incorporated into the general scripts students know for how to behave in college classes, and it is the instructor's responsibility to convey what types of classroom behaviors are appropriate for the course. Some of these decisions will be influenced by the physical space of the classroom (e.g., if the room has fixed or moveable seating), and others will be determined by the instructional goals for the course (e.g., if one goal is to improve students' critical thinking, both asking and answering their own questions would be useful).

It is important for the instructor to clearly communicate the expected norms of behavior (Perlman & McCann, 2004; Vesilind, 2000). For example, there will inevitably be students

surfing the Internet instead of taking notes on their laptop computers, sending text messages to friends, sleeping, chatting, and doing any variety of nonclass-related activities. Policies regarding these issues can run the gamut from strict prohibitions of these distractions to a more laissez-faire attitude toward such behaviors. In either case, instructors should decide what kinds of behaviors they care about and why, and state the policy and consequences for these actions in the syllabus. For example, one of us (B.C.J.) has a policy of answering any cell phones that ring during class, which has resulted in conversations between the instructor and grandmothers, bosses, and girlfriends, in front of the entire class. This policy serves as a humorous but effective motivator for students to set cell phones to silent mode before class starts. The critical point here is that competent classroom management involves premeditated policies that are applied consistently and are commensurate with overarching instructional objectives and learning goals.

21.2.2.1 Relating to Students

Teaching is a skill that can be practiced and improved, and which benefits from research and reflection, but the personal qualities of the teacher cannot be separated from how he or she teaches. Interestingly, students and teachers differ somewhat when asked to name the attributes of good teachers. Whereas teachers usually focus on instructional skills, students list teachers' rapport with students as a key quality (Benson, Cohen, & Buskist, 2005). Indeed, efforts to identify the essence of good teaching suggest that the best teachers are approachable and open-minded, show patience and respect for students, care about students' success and are fair, show enthusiasm and humor, are good communicators, are creative, and make an effort to establish rapport with the students (Benson et al., 2005; Lucas & Murray, 2002). Developing rapport with students pertains to the immediate verbal and nonverbal interactions between a teacher and the students, such as eye contact and knowing students' names, as well as the personality characteristics of the instructor (Benson et al.; Vesilind, 2000). In a survey of students' experiences of rapport with instructors and its effect on their interest in the subject, attendance, and other academic behaviors, students reported that few of their instructors established rapport with them (Benson et al.). In classes where they did feel rapport with the instructor, students expressed more interest and enjoyment in the subject, claimed better attendance, and said they would be interested in more classes with the instructor.

Cultural and generational differences also can influence interactions between instructor and student. One of the best ways to illustrate concepts in class and develop rapport with students is to share personal anecdotes as examples. However, differences in cultural or generational backgrounds can make sharing personal stories less effective, if the students are not able to relate to the instructor's examples, or if the stories feel disingenuous. For example, a student might feel frustration with an older instructor using illustrative references to popular entertainment (e.g., music or television shows) that the student is too young to have experienced.

Teachers have a responsibility to promote a safe learning environment in their classes. It is a given that instructors should avoid prejudice and discrimination toward their students. It is also advisable to refrain from promoting their personal, noncontent-relevant views in class. In particular, it is probably wisest not to share personal political and religious leanings, even when politics and religion may be the topics at hand. For example, political campaigns and elections are rife with wonderful illustrations of many psychological topics and principles.

However, people in general tend to feel very strongly about their political views. To avoid alienating students who identify with particular social or political groups, examples from politics used in class should be neutral or equally balanced between various sides of an issue. To do otherwise and favor one side or the other is likely to alienate a segment of students and potentially distract the class from the topic at hand.

Varying Academic Backgrounds. Students come from a variety of scholastic backgrounds, arriving in class with varying levels of proficiency for basic skills. Teachers must therefore attempt to accommodate students' various starting points and bring them all up to the same level by the end of the course. One way to do this is to break assignments into segments that allow students to practice and master skills in sequence, gaining a new skill set through the course of the assignment. For instance, a teacher who wants lower-level undergraduate students to write a research paper would break the assignment into discrete sections, and provide feedback for each step before moving on to the next (Burke, 2008). Splitting an assignment into segments achieves several objectives. The first is that students are able to benefit from teacher support throughout the sequential steps of assignments requiring cumulative competence. The second is that students are required to work on the assignment gradually over time, avoiding the common pitfall of last minute, desperate attempts to complete complicated assignments. Third, because the early stages of the assignment are monitored and students are able to correct missteps before compounding them, the final product is of higher quality overall. Finally, receiving assignments in good condition expedites the process of grading, and the students are able to gain a common outcome regardless of differences in their ability upon beginning the assignment. The approach of breaking assignments into their components so that students can be guided and supported throughout the process works for presenting content as well. Teachers should begin with simple concepts and terms, and work up to the more complicated and complex concepts by building up the foundation of information (Zakrajsek, 1998).

Learning Styles. In addition to students' varying academic backgrounds, there are individual differences in learning styles among students. There are multiple theoretical explanations for differences in how students learn (Fletcher & Patrick, 1999). Without knowing the specifics for each student in every class, teachers can accommodate these differences merely by using a variety of modalities to present information and teach skills. One classification of learning styles might separate students who prefer hearing information from those who prefer visual representations, whereas a third benefits most from personally performing a task to understand how it works (Fletcher & Patric). An example of how to take into account these different styles would be if an instructor for a research methods course explains how correlations work, shows them sample scatterplots of positive and negative correlations, and then has them practice calculating correlations themselves. By presenting the same information in three different ways, the instructor can accommodate the students' different learning styles in his or her class (Fletcher & Patrick; Gibson, 1992; Vesilind, 2000).

Class Time Management. It is tempting for new academicians to attempt to apply the depth and breadth of their knowledge of their specialty to course assignments, under the impression that more is better when it comes to sources (Boice, 1992). However, findings suggest that students can absorb approximately four new topics in 1 h, and less if they have had no previous exposure to the information (Zakrajsek, 1998). Relatedly, students' attention also wanes throughout the period in a predictable curve. Students are most alert during the first 10 min of the class, retaining approximately 70% of the material presented, and then their attention drops precipitously, until the last 10 min of the class when they are likely to retain approximately 20%

of the material presented (Fletcher & Patrick, 1999; Vesilind, 2000). Teachers can derail this progression by varying tasks throughout the class, such as lecturing for a little while and then presenting a short video clip before discussion.

Dealing with Problems or Difficulties in the Classroom. Problems and difficulties in the class-room can be anticipated in some situations, or in others, completely take an instructor by surprise. Some problems may be common enough that the institution has a standard policy, such as procedures for addressing academic misconduct (e.g., cheating, plagiarism). Other dif-ficulties may be harder to predict, but teachers can deal with them effectively by using their own personal teaching philosophy, in conjunction with the learning objectives for the course, to guide their decisions. Occasionally, a student will test an instructor's limits or resolve, by pressing some issue beyond the instructor's reasonable expectations. This challenge might manifest as a grade dispute, an unacceptable excuse for missing an exam, or an objection to the enforcement of a policy, for a few examples. Students can occasionally be vexing, and their behavior might prompt a strong emotional response from the instructor. In cases where the instructor needs to make a decision about how to handle a problem *post hoc*, it may be impor-tant to gain some distance from the confrontation in order to calm turbulent emotions and think more objectively about the problem.

Class Disruptions. Teachers may also encounter difficulties handling disruptive students in class. Students might do a variety of things that disturb or distract their classmates or the instructor, and the instructor, as the manager of the class, has to address the problem directly. It might be something relatively benign, such as whispered conversations while the instructor or other students are talking, or it could be something more disturbing, such as a student who says something extremely offensive during class discussion. Sometimes disruptions happen because students are not aware of the norms for appropriate conduct in class, but other times a student might act out of malice. The most important step in addressing problems such as these happens on the first day of class, when the instructor clearly lays out the rules for proper class-room behavior. Students will respect a teacher who takes firm control of a classroom, and most of the time, a warning is all it will take to head off a major issue.

Instructors' approaches to different disruptions vary based on the instructor's personality as well. New instructors should take several steps to deal with problems or disruptions in the classroom. The first step is to cultivate the all-important practice of documentation. The teacher should keep record of his or her interactions and exchanges with problem students, so that, in the event of escalation, he or she has evidence backing up his or her claims. This includes tak-ing notes on things that happen during class. Second, instructors who are having continued problems with students disrupting class should seek out colleagues for support, and to exchange ideas for solutions to the problem based on others' experiences. Finally, instructors should be consistent with their enforcement of course policies and the application of consequences for misconduct. Students might interpret inconsistency as an injustice and take affront, which can make touchy situations worse. The *sine qua non* for dealing with disruptions in class is that advance preparation is the key to avoid problems before they happen; as the aphorism goes, "an ounce of prevention is worth a pound of cure."

Sensitive topics can also provoke disruptions in class. In psychology, especially, controver-sial or emotion-laden topics are de rigueur, as in classes covering topics like prejudice and discrimination, sexuality and gender, politics and law, developmental issues, or mental illness (Poe, 2004a). First, there needs to be a concrete and explicit reason provided for broaching each touchy topic. There is value in discussing these topics, both in terms of teaching critical

thinking and also in presenting the empirical evidence supporting claims. Poe suggests that instructors announce their own biases and opinions, in order to clearly differentiate between them and material presented as a fact. To further avoid land mines, the instructor might present both sides at the beginning, in order to communicate to students that either perspective is a legitimate part of the discussion. They might start class with a disclaimer about the sensitive nature of the topic of the day, and reiterate the need for students to remember to be respectful of their classmates. In cases where the students might disagree with the instructor, or with other students, the instructor should model how to respectfully disagree without disparaging each other. It may be necessary to explicate injunctions against criticizing peers as opposed to ideas, avoid monopolizing the discussion, and refrain from sharing personal information that might identify someone else to the class (Poe). Finally, to accommodate students who may have been too shy to speak up in class, or students who did not get a chance to express their opinions, a useful exercise is to have everyone write questions or comments and turn them in (Poe). Touchy subjects can produce teachable moments, but the teacher should plan ahead to take advantage of them, and to be able to handle them carefully enough that the learning objective is achieved without traumatizing the students.

Students with Disabilities. Some challenges teachers face pertain to meeting students' special needs adequately and compassionately. It is important that teachers consider how students with disabilities will be able to manage their courses. The most common disabilities, such as attention deficit or physical handicaps, are usually addressed by the school's institutional support services for students with disabilities. Many times, such students will be able to take exams under special circumstances, proctored by school staff trained to assist them, or outfitted with special equipment. It is a good idea to require that students taking exams outside of class take them at the same time as the rest of the class, if possible, to make it fair to the other students in the class (Boyd, 2008). Instructors should provide information in their syllabi about availability of services to provide equal opportunity to disabled students, and note the importance of students notifying the instructor of special needs early in the semester. As part of the course planning, the instructor should also think ahead about how requirements and deadlines may be adjusted for students with disabilities, including, for example, scheduling due dates with enough time to fit extensions in before the end of the semester (Boyd). Instructors might consider implementing written contracts with disabled students, explicitly stating the requirements and expectations for both the student and the instructor. By law, the instructor is responsible for providing equal opportunity to succeed, and it is imperative that instructors be informed of their school's services and policies (Boyd).

Students with disabilities may be proactive about addressing the issue with their instructors at the beginning of the semester, but some may not. Two students whose circumstances required special dispensation, each with differently satisfying outcomes, serve as good examples of the kinds of accommodations that might be necessary. The first student was an exemplar of proactive helpfulness. He approached one of the authors (B.C.J.) before class the first day and explained that he had an illness that occasionally made him so weak that he could not write, and other days not make it to class at all. He came with the paperwork I needed to sign for the Services for Students with Disabilities (SSD) Office filled out, a letter from a doctor explaining his circumstances, and the student worker assigned to be his note-taker in class. His conscientiousness made it so that the only action needed on the part of the instructor was to send his tests to SSD ahead of time. Most of the time, SSD offices require students who register with them to have documentation of their disability, and then SSD contacts the instructors for

each student in order to arrange accommodations while keeping the nature of the student's disability confidential (Boyd, 2008).

Another student presented a much more complicated case, and he was not proactive about informing the teacher (B.C.J) about how to best accommodate him. This student suffered from severe cerebral palsy, thus needing a large motorized wheelchair, and he could not speak or write. He enrolled late in a senior-level seminar course, which had been specifically designed to be very active, with demonstrations and simulations, small group and class discussions, short in-class writing assignments, and out-of-class reading and writing projects. The student did have a computer that would speak aloud what he typed into it, and that helped with discussions and small group work, but he had enough difficulty typing that his spontaneous replies were always delayed. He could not easily hold a paper to read it, which made handouts troublesome, but he had arranged with a classmate to take notes for him. His condition made it necessary to retool many of the lesson plans, and required that the instructor be prepared ahead of time enough to send him materials for class the day before so he could read handouts or type out responses on his computer. The instructor was confronted multiple times with decisions about whether to excuse him from certain requirements or hold him to different standards when compared to the other students in the class. This student ultimately dropped the class after failing the midterm. Though unsatisfying, the experience is a reminder that, when a disabled student does not offer information about how to meet his or her special needs, the teacher should reach out to other instructors and the SSD office to get help and advice. As Boyd (2008) notes, instructors may feel either exploited or ineffectual when dealing with students with various disabilities, if for example, a student claims a disability when asking for an extension, or conversely, if all the instructor's best intentions fail to reach a student. Careful preplanning and open communication with colleagues lessens the magnitude of either emotional possibility.

Whether thinking through adjustments in expectations, or finding materials that provide equal accessibility, it behooves the instructor to be well informed. The school will have an official policy and procedure in place to accommodate disabled students, as dictated by law, but instructors can also become more informed on how they personally can adjust their own teaching methods. The decision whether to hold disabled students to the same standards as the other students in the class on course components affected by their disability is dependent on philosophical, legal, and ethical considerations, in addition to the pedagogical facets. Instructors have a growing wealth of technology at their disposal to help them accommodate students with visual impairments, for example. Instructors who are recording their classes to podcast lectures on their Web sites can use that same technology for students with disabilities as well (Boyd, 2008). Occasionally, students may request to record classes for themselves. In either situation, instructors should get permission from the other students in the class before any recordings are made (Boyd,). Another option for instructors is to contact the publishers of course material to inquire about alternative formats. Many textbook publishers have either preprepared audio recordings of their texts, or plain text (*.txt) files of the books that can be fed into computer programs that will speak it aloud (Boyd). Depending on the typical population of a school, instructors might take into account the availability of alternative formats when choosing course materials in the first place. The bottom line is that instructors should plan for students with disabilities to be in their courses, and think about how to best accommodate their needs.

Troubled Students. Sometimes, issues in students' lives outside of the class enter into the classroom. Teachers are at times the first to notice if a student is experiencing a personal

problem, for instance because the student's work changes suddenly (Perlman, McCann, & Kadah-Ammeter, 2008). It might be that a student seems to be suffering from a condition such as extreme depression or an eating disorder, for example, and the teacher feels like the problem is severe enough that he or she is morally obligated to approach the student to try to help. However, teachers should be aware that there are risks involved with dealing with troubled students, and therefore there are some general rules to remember. Students are somewhat more likely to open up to psychology teachers, especially those with clinical or counseling backgrounds, because the students think that they will be able to help them better than a teacher of another subject might (Perlman et al., 2008). Furthermore, students might be more likely to turn to new teachers if they are closer to the students' age, because they feel like they can identify with the teacher better. Unfortunately, students' personal problems are, for the most part, outside the jurisdiction of the instructor's relationship with them, and in cases where the problem is severe, the instructor's most important intervention is to refer the student to the appropriate authority or service. The university health center will sometimes offer free counseling and psychological services for students, or the student might be able to get the help they need from campus police, the university's legal counseling office, or the dean's office. The point is that the teacher should avoid establishing a dual role with the students. Most teachers are not trained to handle students' personal problems, but even if they are, as in the case of clinical psychologists in academia, it is not appropriate for them to try (Keith-Spiegel, 1999; Perlman et al.).

The APA publishes the organization's ethical principles and their code of conduct, and those documents provide guidelines that all instructors can use. For the most part, if teachers remember that they should avoid doing harm, and try to be helpful, they can address student problems without stepping outside the boundaries of propriety (Perlman et al., 2008). For example, instructors should make an effort to listen carefully to students, respond in a way that demonstrates their respect for the student, and follow through on promises to help by providing resources or directing them toward the people best suited to help them (Keith-Spiegel, 1999). Keeping a student's secrets confidential is important, but the instructor should remember that if they find out that the student is planning to hurt others or themselves, he or she is bound by law to notify the proper authorities. The recent instances of campus shootings serve as vivid examples of how not addressing obviously troubled students can produce tragic outcomes. Teachers should also be aware of the school's policies and available services, and observe departmental norms for closed doors for meetings with students, if they attempt to address students with personal problems (Perlman et al.).

Dual Relationships with Students. Teachers dealing with troubled students should endeavor to avoid allowing a dependant relationship to form between them. A troubled student might become emotionally invested in a teacher who is especially helpful during a trying time, especially because of the hierarchical social arrangement wherein teachers have more power than students do (Keith-Spiegel, 1999; Poe, 2004a; Vesilind, 2000). This risk is why it is important to refer students to the proper services to help with their problems, rather than taking it on personally, even if the teacher is trained to deal with the students' problems. The teacher is still in charge of evaluating the students' performance in the class, and that can be complicated if the teacher has another relationship with the student besides being his or her instructor. Therefore, the instructor might need to be firm about limiting the time spent in conference with the student, or the amount of contact the student has with him or her outside of class (Poe). It might also be necessary for the instructor to carefully derail a student's attempt to over-share personal

information, especially if that happens in class (Poe). In order to be fair to the other students in the class, and to minimize the risk of negative consequences if the nature of their relationship changes, instructors should refrain from forming dual relationships with students.

There are other ways that students and teachers can create problematic dual relationships. Under no condition should teachers become involved in personal, romantic relationships with their students. The school may have a formal policy against this type of behavior, but if not, it is still ill-advised. However, that simple dictate is complicated by the possibility of a prior relationship with a person who then enrolls in the class. Aside from romance, there are a couple of types of preexisting relationships that present a problem for the instructor. The instructor might have been friends with the person or belong to the same circle of friends. A student might have worked as a research assistant in the lab with or for the instructor, or the student might have worked in another capacity in the same place as the instructor. It can be uncomfortable to change the nature of the relationship into one wherein the instructor is suddenly in a position of authority over the person as they might not have been so before. There is a threat that other classmates might feel like the instructor is favoring a particular student, and indeed an instructor's opinion of a student can color his or her grading of the student's work (Keith-Spiegel, 1999).

When instructors and students have the same extracurricular interests or activities, such as recreational activities, local establishments, or religious services, they can be forced into proximity, especially in small college towns (Keith-Spiegel, 1999). A newer manifestation of an inappropriate dual relationship is connecting with students through online social networking Web sites. For example, students may find their instructor on sites such as MySpace or Facebook, and request to be "friends" online. Most of these networking sites offer privacy controls that disallow strangers searching for instructors' pages, and instructors should be mindful of the kind of information they publish about their personal lives online. In general, it is not a good idea to form nonacademic relationships with students outside of class, and prior relationships should be handled with care and in compliance with school regulations.

Instructors Missing Classes. The students do not generate all the problems that might arise in the classroom. Occasionally, life intrudes into the classroom and causes the instructor to miss class. Reasons include everything from jury duty to health problems, and absence might be for one class or the remainder of a long semester. Some absences are predictable, such as attendance of out of town conferences, while others arise completely unexpectedly. In any case, colleges and universities do not provide substitute teachers like in lower grade levels. The options for an instructor who needs to miss class include canceling class entirely or asking a colleague or graduate student to teach in his or her absence. Either approach has its drawbacks and benefits (Poe, 2004b). If there is room in the schedule of a course to accommodate missing a day, it might be that the students just enjoy the day off and class continues when the instructor returns, as if nothing out of the ordinary happened. Other times, however, it might be impossible to stop in the middle or drop whatever material would have been covered on the day an instructor must miss. If an instructor is going to ask someone else to cover the class, there are several things he or she should do to prepare (Poe). A movie or guest speaker might be brought in to advance the topic coverage in the instructor's absence. If the instructor knows another person who has experience teaching the course or satisfactory knowledge of the subject, he or she might be able to provide lecture slides and notes that the substitute can use to present the regularly scheduled material. In this case, the information needs to be accessible, either electronically or organized in such a way that another person could find it in the

instructor's office. Storage and organization are especially important in cases where the instructor's absence is permanent, and another instructor must take over the class mid-semester (Poe). The value of good record-keeping practices cannot be understated when it comes to having someone else step in to lead a class.

Missing or canceling class causes enough difficulty for the school, instructor, and students that instructors should be warned about the repercussions. It might sound self-evident, but instructors should avoid missing class if at all possible. This means scheduling personal or optional traveling around semesters, or planning the course schedule around anticipated absences before the course begins. Colleagues asked to fill in repeatedly should be offered something of equal value in return for their time, both in preparation and class, lest their willingness to help in a pinch wears out. Additionally, the power disparities between faculty and graduate students might make requests for assistance a compulsion to the graduate students, so instructors should be careful not to exploit them unnecessarily (Poe, 2004b). The final warning pertinent to missing class is the effect repeated absences might have on the instructor's professional reputation within the department. New academicians should remember that their promotion and tenure chances can be negatively impacted by injudicious absence. As more departments include student evaluations in the review process, the deleterious effect of excessive absences, or absences that are not handled well, on students' opinions of the instructor gains relevance (Poe).

Aside from the basic work of teaching students in the classroom, and the planning that goes on outside of the classroom, a key element of basic competence is self-assessment and reflection. Teachers who do not critically and empirically evaluate themselves and their methods for efficacy are blindly grabbing for success. Because the pressures of teaching, both in time consumption and emotional investment, can be so distracting, it is important to be methodical about improving teaching effectiveness. The following section describes the basic components of this self-evaluation.

21.2.3 Assessment and Professional Development

Academicians should always be thinking of the future, for practical reasons such as tenure review, as well as for the personal gratification gained from having a successful career; however, success is defined (Savory, Burnett, & Goodburn, 2007). For many new academics, teaching consumes most of the time spent working for the first few years at a new position. Boice (1992) observed that many new teachers expect the efficacy of their teaching to improve, but treat it as a passive process that will happen automatically over time. He reported that, regardless of the type of school, new teachers experienced similar obstacles and evinced comparable strategies for professional development. Many taught defensively in an effort to avoid failure, and based the estimations of their teaching prowess on the tenor of students' comments in course evaluations. However, the best way to go about growing and improving as a scholar is to be methodical about reflection and self-evaluation, and make steady but gradual changes.

Three main audiences care about the professional developmental trajectory of academics. Students, colleagues, and supervisors are all directly affected by the decisions teachers make about their careers, and it is important to establish trust with them all. The first and most important step in growing as a teacher is systematic reflection on pedagogy and learning outcomes (Boice, 1992; Gibson, 1992; Savory et al., 2007). Learning outcomes can be generally

described as changes in knowledge, cognition, behavior, skills, attitudes, or beliefs (Gibson). This manifests itself in simple tasks, such as taking notes on how assignments or lecture presentations were received, or more complicated measures, such as testing iterations of assignments across semesters and measuring students' performance. The point of formative evaluation is to determine if a teacher is effective, and how he or she might become more effective (Buskist, Keeley, & Irons, 2008). One way for instructors to begin this process, taking into account the three audiences, is to formally write down the impression he or she is trying to create. This means consideration of the things the instructor wants the students, and his or her colleagues and supervisors, to say or not say about his or her teaching. The idea is that consideration of the question, "Who shall I be?" naturally leads to the question, "What shall I do?" which leads to a plan for action (McGovern & Miller, 2008). To make the project even more specifically applicable to instructional objectives, and to avoid a myopic focus on classroom performance as the entirety of teaching competence, the instructor might then go through the same process for each of his or her course components (e.g., tests, assignments, lectures, etc.) (Buskist et al., 2008). During this process, the instructor might consult a taxonomy of learning objectives, revisit his or her teaching philosophy statement, and refresh his or her memory for motivation and learning theories. The goal of the exercise is to find and make connections between what the instructor wants to achieve, and how he or she is putting plans into action (Savory et al.). This exercise is furthermore useful for avoiding the tendency of instructors to teach in a haphazard manner, using trial-and-error or default methods (Wilson & Kipp, 2004, for an in-depth treatment of the benefit of talking about teaching with colleagues).

The standard method of reflection that is typically imposed on instructors by their department is student course evaluations. These evaluations solicit both global and summative feedback on instructors' behavior, but while they are certainly necessary, they are not a sufficient tool for assessment of instructors' development and competencies (Fletcher & Patrick, 1999; Gibson, 1992). Some instructors get distracted by the "popularity" aspect of course evaluations, contending that instructors who give the highest grades and have the lowest expectations will score well with students. Others argue that students are not in a position to evaluate the efficacy of pedagogy they do not know or understand. Students are notorious for not appreciating the things that educators know are good for them. An evaluation of recent literature on teaching of psychology by Wesp and Miele (2008) determined that there is diminishing reliance on student opinion as a measurement of teaching competence. They note that student evaluations are a fine instrument for assessing students' enjoyment of methods or activities, but not learning outcomes. Research has determined that student opinions of teachers do not correlate with pedagogical effectiveness (Wesp & Miele). Many instructors object to course evaluations being used by supervisors in promotion and tenure reviews, for these very reasons.

There are, however, ways to make student course evaluations more helpful measures of teachers' efficacy. First, instructors should offer evaluations more than once during the term, so that there is time to make adjustments that affect the current class, which motivates the students to put more stock in evaluations overall. Second, evaluations should collect both summative feedback that is personalized to the instructor and the course. However, students should have a chance to write replies to open-ended questions in order to supply examples or explanation of their ratings. Finally, evaluations should assess specific aspects of the course and instructor, as opposed to being restricted to overarching generalizations that do not allow for nuance.

One of the foundations of good, reflective teaching is good record-keeping. Teachers who want to systematically assess their development over time need to collect and organize their information in a way that allows them to monitor changes (Savory et al., 2007). These records consist of both the records generally collected in the normal course of teaching a class (e.g., grades), as well as notes about ideas and outcomes. Another good exercise that all teachers should complete is video or audio recording of their teaching and evaluating the recording for both style and substance. Many problems or distractions that are invisible to the teacher doing it can be discovered and eliminated, benefiting the students. Though it can be a painful exercise, teachers can only improve issues they know about.

Once instructors have gotten into the habit of creating and collecting records of their teaching, the next step is to immerse themselves in understanding the principles of teaching and learning (Savory et al., 2007). This might mean reading general teaching instruction books (McKeachie's, 2002) or reading current research in peer-reviewed journals about teaching. An instructor's colleagues are an invaluable resource for learning about teaching and developing professionally. Conferences or workshops about teaching can expose instructors to innovative research, allow them to network with other skilled teachers, and offer a forum for discussion with like-minded colleagues from outside of their home institution (Gibson, 1992).

Exposure to sources of new methods and strategies allows teachers to pool their effort and time when they share their discoveries and developments with each other. New teachers may begin their jobs with a limited arsenal of teaching methods, or little to no experience with practical applications for theoretical teaching principles.

21.3 Expert Competencies

Novice teachers and academicians need necessarily start at achieving basic competencies while teaching selected content material. As teachers gain experience, and as their content knowledge expands in depth and breadth, they can begin to build their repertoire of teaching skills and course offerings. Experienced teachers who are experts in their areas should be able to present content information at different levels of complexity. Instructors may need to teach the same content area at an undergraduate introductory level, a senior level, and/or a graduate level. The conversion requires that teachers be able to know both how to choose information that will interest and benefit students at different levels, and prioritize information that students need to understand whether they are interested or not.

It is important when teaching different level courses in the same area that the departmental standards support the educational objectives set out in each course (Marsh & Poepsel, 2008). Departments design their curricula based on what students need to know to be properly trained in the area, and this means that courses at different levels (e.g., introductory or advanced) need to be complementary. For instance, a sophomore-level course in a topic should prepare students for a senior-level course in the same topic, and if required as a prerequisite, it should be necessary not just sufficient for success in the senior-level course. Furthermore, courses that build upon each other across topics (i.e., abnormal psychology before clinical psychology courses) should be both necessary and sufficient in the progression of students through the program.

Expert teachers should be more systematic about designing their courses in accordance with their desired learning outcomes. This planning process is streamlined in experts because

they have achieved facility with both content materials and pedagogical methods, and are able to draw from known alternatives the best way to meet those goals. While novice teachers work from a more static script based on their rudimentary understanding of pedagogy, expert teachers can look ahead to the long-term ramifications of their decisions about course design and execution. For instance, expert teachers who use scientific experimentation to test the efficacy of teaching innovations or interventions can design their educational goals and instructional objectives to produce learning outcomes that are able to serve as dependent variables (Smith, 2008). Teachers who demonstrate expert competence have the entire course, from planning to assessment, purposefully designed to meet goals on multiple levels: learning goals for the students, integration with the department's overall outcome goals, and the teachers' own personal professional development goals.

21.3.1 Outside the Classroom

21.3.1.1 Course Planning

Expert competencies can be distinguished from basic competencies on at least two important dimensions. The first is how well the teacher himself or herself understands the content material and is able to synthesize that information for the students. The second is how well the teacher organizes the presentation of that content material based on pedagogical principles. For both dimensions, a similar progression is the most effective approach to planning and presenting the material. As a teacher gains expert competencies in a given content area, either because he or she specializes in that material or in the process of learning the content to teach it, his or her understanding of the information reaches the highest taxonomic levels of knowledge. The instructor has taken the basic principles and jargon, built cognitive structures to organize that foundational material, and is able to use the information practically, having an understanding of procedural applications or steps. An expert in a content area will then be able to look critically at how the knowledge he or she gained was produced, attaining metacognitive knowledge. Likewise, experts not only have the highest levels of knowledge of an area, but are also equipped to use the more complicated cognitive processes of analysis, evaluation, and creation of new knowledge.

Taxonomic Integration. It is important for instructors to think from the perspective of the naive students when planning how to teach a subject, instead of approaching the process from their own expert point of view. Students need to move through the same sequence of taxonomic levels that the instructor originally followed himself or herself. They will not be able to grasp the organization and structure of information if they are only given the lowest level of basic knowledge (i.e., jargon). Instead, teachers should guide students through the steps, allowing them to build their own understanding from the foundation up, using the principles of scaffolding. While the uppermost levels of knowledge require a solid grasp of the lower levels, understanding of the basic information is also augmented when seen in the context of the higher levels. One way to plan this guiding process in course design at an expert level is to approach the instructional objectives from the end to the beginning. This is called *backward design* (Wiggin & McTighe, 1999). If the point of a course is for students to gain a practical skill or procedural understanding of a content area, then the examinations should test for that level of knowledge. From the exams, the teacher should plan how the students need to practice the

action scripts in order to gain the needed procedural knowledge, and make those activities or exercises the course components (e.g., discussion, assignments, demonstrations, etc.). The last step is to figure what the students need to understand about how the concepts fit together, and organize instruction to achieve it and ensure that instruction encompasses the presentation of basic elements and factual knowledge. Inexperienced teachers may be distracted from the necessity of thinking of the end goal when putting together content material, and end up missing important foundations, mismatching the exercises to the cognitive structures of knowledge, or not practicing the proper skills. An expert teacher is able to not only keep sight of the hierarchical levels of content information, but to also approach instruction methodically according to pedagogical best practice.

Textbooks designed for undergraduate courses tend to be organized around a single guiding principle. The principle might be a common application of the content, an overarching theme to draw disparate areas together, or a particular theoretical perspective. Structural organization of knowledge may differ between that presented in textbooks and that used by theorists or practitioners in the field. An expert teacher, however, can use his or her proficient knowledge of the area to decide on the best organization of the content to suit his or her educational goals. Expert teachers, therefore, benefit from reviewing a variety of sources or textbooks, in order to take advantage of the different perspectives and examples. Teaching at higher levels, such as in upper-level undergraduate courses or training graduate students, is fraught with gray areas and equivocation that lower-level students are not equipped to evaluate and assimilate. For example, one textbook might present information about cognitive behavioral therapy (CBT), but an academic clinician would know that there is a variety of methods included under that omnibus label that might even contradict each other. An expert teacher and a professional-level clinician would be able to discern what of that complexity is important to learn, as well as be able to pull in resources from different sources to support their conclusions.

Integration of Methods and Content. In addition to the benefit of customizing curricula to suit individual teaching priorities, an expert is able to bring together information about the genesis of content knowledge, meaning and the empirical research responsible for perpetuating psychological discovery and innovation, in a way that illustrates the proper breadth of study. For example, one potential downfall of textbooks for lower-level courses is that they present classic and contemporary research in a manner that might suggest to students that there are a few seminal studies or revolutionary researchers who determine what is "true," and that the rest of the field merely elaborates on what those luminaries find. This perspective is somewhat evident in collections of selected readings generally produced as textbook supplements, or in the anthologies of current studies that comprise the various psychology annuals. Far from the idea of a "critical experiment" approach sometimes insinuated in textbooks, psychological inquiry is comprised of programmatic research and convergent evidence. In comparison to either supplemental compilations or professional annual reviews, a suitable mid-level approach is the series of books that present current controversies in select subfields of psychology and offer opposing research reports for students to evaluate on their own.

Along the same lines, expert teachers should strive to incorporate methods with content in order to continue students' progress toward metacognitive levels of knowledge. It is important to know *how* psychologists know the things they know, and understand how inextricably intertwined the *way* knowledge is gained is with the knowledge itself. Social psychology offers an exemplary model for integrating research with content information, because social psychology explores everyday human phenomena that lay people are already motivated to explore

themselves. The simplest way to achieve this goal is for teachers to include information about which research methods are appropriate for investigating which types of psychological phenomena simultaneously with the content information. Instructors might require that students evaluate the research used to support claims for soundness, or better yet, practice designing their own research to test ideas and conclusions. Though in many schools, undergraduate students are not able to conduct independent research as a course component, they may still benefit from the mental exercise of choosing the proper methods, formulating hypotheses, selecting and operationalizing variables, and thinking through questions of analysis and validity. Graduate students are able to pursue their ideas more often, which is why many graduate-level seminars require students to write research proposals within the content area as the major requirement in the course. When students are able to evaluate, analyze, and synthesize both the content knowledge *and* the methods of investigation necessary to achieve it, they have reached the most sophisticated level of knowledge in that area.

Adapting Existing Courses. Another aspect of modifying courses to increase a teacher's repertoire is converting classes across venues, such as making in-person courses available in an online format. The first thing to consider is what aspects of the course are imperative to competency in the topic, and how those aspects will translate to a new setting. For instance, courses with laboratory portions, such as undergraduate methods courses, may suffer from adaptation to an online format, because the hands-on experiences possible in a lab cannot be reproduced effectively online. One of the most difficult attributes of a physical classroom to convert into an online format is immediacy of the material and the instructor. There is a powerful motivation and inspiration in the fact of having to be somewhere at a specific time, surrounded by classmates and an instructor. However, if the teacher is mindful of the overarching educational objectives, and grasps the structural organization of the topic area at a conceptual level, he or she should be able to design exercises that guide students to the same procedural knowledge that the original activities did in person, using principles of backward design. This harkens back to two different aspects of course design and classroom management mentioned earlier in the chapter. First, when making courses available to differently abled students, teachers need to be imaginative and resourceful in designing course components that are accessible to a variety of students. Second, though most novice teachers do well to take established teaching methods and course design from existing sources (e.g., textbooks or colleagues who have previously taught the course) as a starting point, as they become more proficient in both the subject area and pedagogy, instructors should be equipped to produce innovations. This reflects their achievement of the highest taxonomic levels of knowledge, which are creativity and metacognition (i.e., "thinking about thinking"). In research, this process manifests as replication with different operationalizations of the same variables, which provides both external validity and convergent evidence of the conclusions drawn. In the classroom, those outcomes are equally important to good teaching and learning.

Other changes a more experienced teacher might make would be to accommodate new populations of students in the class (for instance, if the course were cross-listed with other departments), or present a course during the summer as opposed to the semester. Both of these differences in course presentation are affected by the way the teacher instructs students on the cognitive structuring of the information. From other majors, especially psychology's cousins in the social sciences (e.g., sociology, anthropology, etc.), the students coming in may have been taught completely different ways to organize and evaluate the basic information of an area. For example, psychology places great value on experimentation and multivariate approaches to

investigating psychological phenomena, whereas sociology students might be trained to prefer ethnographic research methods, or anthropology students might favor appreciative or participatory inquiry. When students from other disciplines are allowed to enroll in courses without fulfilling departmental prerequisites, the class's progress can be delayed by the necessity of working backward until a common denominator can be found in the organizational cognitive structures of different students, and beginning from there. Summer courses can indeed have the advantage over semester courses when the students need intense guidance to build cognitive structures, because most summer courses operate on a condensed schedule, and therefore gain momentum more quickly when accruing a critical mass of information upon which to found their understanding.

Increasing Technological Sophistication. Some of the technological advances in teaching make such conversions, or sometimes the modernization of an existing course, easier due to the parallel nature of in-person versus technology-driven methods. The most straightforward example of comparison may be the online discussion board versus in-class discussion. While the in-class version of discussion benefits from immediacy and nonverbal cues to enhance communication, online discussion boards boast several, possibly more valuable alternative virtues. First, online discussion boards offer asynchronous interaction between students, allowing discussion to occur even when students are not able to be in the same place at the same time. This is good for nontraditional students, or for allowing discussions to extend beyond the confines of a single class period in time. It also keeps a permanent record of discussion contributions, which is useful for both the instructor when grading participation, but also to students wishing to refer back to previous statements. Finally, it allows students to not only think through what they want to say without the influence of the same types of personal or social pressures (e.g., shyness, monopolizing by classmates), but also to increase the likelihood that students will process the information at a deeper level, in order to express themselves in writing. If an educational objective for a course is to make students be able to evaluate, synthesize, and communicate their understanding of topics, then discussion is a good method for practicing those skills. Online discussion and in-person discussion both achieve those ends, and either would be a suitable adaptation for different settings of a course.

Injecting new technology into the classroom should always serve to increase the effectiveness of instructional objectives, not as technology use for technology's sake. Some technologies allow teachers to solve a logistic problem or strengthen the efficiency of certain teaching methods. In the same way that online discussion boards might allow distance students to interact with each other despite not sharing a classroom, some new classroom technologies permit teachers to do activities or exercises with classes that would otherwise not benefit from such techniques. In large-enrollment courses, for instance, small groups may be able to work through problems or practice exercises using online discussion boards out of class, whereas in-class discussion in small groups would be impractical because of the sheer size or configuration of a large-enrollment classroom. An example of technological innovation especially effective for large-enrollment courses is "clicker" technology, where students have individual, wireless communication devices, with which the teacher can administer and score impromptu test questions, take roll, or conduct informal surveys in the class and immediately integrate it into the electronic presentation of the lecture. Clickers allow students to be more actively participatory even in classes with hundreds of students enrolled. Occasionally, the integration of new technology into a course forces instructors to reevaluate their course components, delivery, or instructional objectives, as inconsistencies or flaws are highlighted by the new medium.

As described in the basic competency section of this chapter, use of technology should be carefully informed by the educational goals of the course, in order to ensure that there is a good fit between the strengths of the tool and the desired learning outcome.

21.3.2 In the Classroom

Differences in students' learning styles necessitate that teachers incorporate a variety of methods and techniques in their classes in order to improve the chances of reaching all the students. Advanced teachers can go further to improve the utility of their methods and materials for a wide array of students by taking advantage of some more complicated approaches. Calvin P. Garbin, one of the authors, asks his students to think about how they learn best, whether by listening or by reading, and use their weaker learning style to "warm up" before attempting to learn new material via their stronger learning style. For example, a student who is an auditory learner would benefit from reading the text before attending class, in order to begin to establish the jargon and cognitive structures necessary to assimilate the material presented in class. This allows students to get more out of the lecture than if they were to attend "cold." Likewise, a student who benefits more from reading would use the lecture as a "warm up" for doing the reading assignment, so as to get more out of the text. Another way to think of this two-step process is metaphorically. Aside from one or another learning style, students need a preliminary foundation of information upon which to build understanding (see the taxonomies of learning objectives), and they are only able to absorb small amounts of completely novel information in a sitting. Therefore, if students prepare for class by reading the assigned text or completing some other introductory activity, for example, it is as if they have been provided a coat rack in their own minds, and then in class, the instructor hands them the coats to hang upon it. Without the rack in place first, the coats presented in class just fall to the floor. Following this two-step approach allows students to get more benefit from time spent studying and in class.

21.3.2.1 Responsive Teaching Methods

An increasingly common method for maximizing the utility of class time spent with the instructor is called *Just-In-Time Teaching* (JITT; Novak, Gavrin, Christian, & Patterson, 1999). Teachers using this method require students to complete brief web-based assignments shortly before coming to class, which the instructor then uses to tailor class time to meet specific students' needs. For instance, students might take a quiz over the material to be covered, and based on what most students are or are not grasping, the instructor can adjust the day's lecture to focus on areas that are most challenging. This technique is a highly responsive way to make class an active learning environment, in which students are clearly and explicitly participating in the construction of their own understanding. Frequency with which an instructor employs such methods may vary based on the complexity of the material, the level of knowledge students bring to the class to begin with, or the instructor's comfort with the material.

   As a complement to the spirit of JITT, one of the authors (C.P.G.) developed a technique that is similarly responsive to students' spontaneous needs, but in the opposite direction from JITT. He dubbed this method *Barely Late Teaching* (BLT). Instructors can accommodate spur of the moment issues, such as providing clarification or further examples and demonstrations

of complicated processes covered in class, by producing and providing further instruction or material soon after class adjourns. For example, after students struggled in an undergraduate lab with running a statistical analysis using instructions presented in paper handouts, the instructor (C.P.G.) prepared an Adobe Captivate flash animation of the process and sent it to the students. Captivate allows a user to "record" what they do on a computer screen, such as clicking through the guided user interface of a statistics program, in a video file, and then insert labels and narration if desired. The result is largely the same as demonstrating something to students in person. Another instance of BLT that proved the method's usefulness was when the instructor, after going over the same exam review for a series of students visiting office hours individually, audio-taped his explanation and e-mailed it to the rest of the class, under the assumption that most of the students would benefit even if they could not make it to office hours. Teachers can employ the BLT technique for handouts needing modification, additional lecture presentation slides, audio files of explanations, or other assorted tools.

In discussion of the possibilities and merits of BLT, one of the concerns that arises is whether this method makes the instructor appear unprepared versus committed because of taking that extra effort. Though instructors should always put effort into planning ahead for contingencies when preparing their courses and lesson plans, the reality is that unexpected questions do surface, while other times inspiration strikes after the fact. Sometimes, the best laid plans fall flat. Rather than lamenting the occasional unpredictability of "teachable moments," instructors can take advantage of unanticipated opportunities to improve their instruction, and then incorporate those new materials into the original plan for the next time he or she teaches the course. Teaching is a dynamic process, and expert teachers are able to adapt their methods in response to changing students' needs.

21.3.3 Assessment and Professional Development

Development as a teacher is dependent on reflection and systematic self-evaluation. Instructors might feel discouraged when they read books describing the personal characteristics of the best teachers, because those qualities are usually stated in global, immutable terms (Keeley, Smith, & Buskist, 2006; McGovern & Miller, 2008). However, it is much more practical to think of the *behaviors* of good teachers, because behaviors can be changed through effort, while personality characteristics often cannot. McGovern and Miller reported that while researchers can distill the personality characteristics that might underlie the behaviors evinced by master teachers, the qualities that stand out to students are particularly effective instructional techniques. It makes more sense for teachers to practice the skills of teaching than to focus on the dispositional virtues found in many good teachers. Whether novice or experienced, teachers' habits and practices are what make them good teachers or not. (Buskist et al., 2008, for a comprehensive overview of evaluating and improving teaching).

Teachers wishing to move beyond basic competency toward expert status should be systematic about their self-evaluation (Boice, 1992; Savory et al., 2007). In addition to the normal reflective writing recommended for simple examination, teachers might turn to empirically tested scales and assessments. For example, Buskist, Sikorski, Buckley, and Saville (2002) developed the Teacher Behavior Checklist (TBC) based on students' and teachers' ranking of the characteristics of the best teachers, and the behaviors that reflected those qualities. Keeley et al. (2006) adapted the TBC for use as an assessment tool that teachers wishing to advance

their teaching development could use to identify problem areas. A factor analysis of the measure determined that two subscales were represented in the checklist. The first, which they interpreted as "caring and supportive," echoes the emphasis in previous research on the importance of developing rapport with students (Benson et al., 2005; Fletcher & Patrick, 1999; Lucas & Murray, 2002). The other factor identified was "professional competency and communication skills" (Keeley et al.). As Boice noted, novice teachers may approach improvement as a passive process; an expert teacher, employing a psychometrically sound, diagnostic instrument such as the TBC, can identify concrete areas to target for improvement and develop a plan for action.

Having a plan of action is important for professional development as well as triage. The statement of a teaching philosophy is another manifestation of a plan. Many novice teachers do not develop a teaching philosophy that is any more complex than a few guiding principles. However, it is a good thought exercise as teachers grow and mature to formalize their priorities and goals. Oftentimes, sentiments that are not articulated fail to influence actions meaningfully or regularly. In the same way that careful planning up front helps a course to actually achieve its goals and objectives, formal thought about the reasons behind pedagogical decisions and overarching goals increases the likelihood that they will be successful. As teachers move through their careers, improvement requires reflection and attention to empirical evidence of learning outcomes.

21.3.3.1 Scholarship of Teaching

In addition to the learning outcomes for students in each course, teachers define themselves and their careers the same way researchers do. The most defining product of the hard work that goes into teaching professionally is dissemination of the results (Smith, 2008). Publications, presentations at professional conferences, and closer to home, "brown bags" and colloquia offered within the department are appropriate venues for both sharing personal experiences and benefiting from others'. If an instructor belongs to a department where teaching is not supported by these kinds of activities, it stands to everybody's advantage to initiate them (Boice, 1992). These kinds of discussions can allow colleagues to share variations in pedagogical philosophies, success (and failure) stories, techniques and methods, or approaches to grading and testing, for example (Gibson, 1992). The obvious corollary is that teachers need to keep apprised of new teaching developments by reading publications and attending teaching presentations.

Instructors satisfied with basic competency are coasting on what works well enough, but expert teachers will endeavor to incorporate more sophisticated teaching methods and strategies. There are always going to be trends, new ideas, and rebirths of old techniques that sweep through the discipline and inspire teachers. The best way to choose which new things to try is to look at what needs changing first. The difference between trying anything randomly and selecting specific tools to meet known needs is an instructor's time and energy spent with measurable benefit (Savory et al., 2007). Again, it behooves teachers to behave as researchers in this exercise. The first thing to clarify is whom innovations are meant to benefit. Between the students and the instructors, there will always be those who are excelling, those who are struggling to stay afloat, and everybody else.

Innovations and Interventions. Innovations might first be applied to those students needing remediation. Using empirical evidence of learning outcomes, teachers can identify the students

who are not achieving the objectives of the course, and attempt to determine the reason why they are not (Boice, 1992; Savory et al., 2007). Most classes will have a relatively normal distribution of student success (with the possible exception of mastery based courses wherein students redo assignments until they pass them), and not all students who fail do so because the teacher has not met their needs. Some students will fail on their own merits, and while that can be disheartening, it is unavoidable. However, some of the newer technological tools teachers have at their disposal can be used to distinguish between students who are not holding up their end, and students who are struggling but have the potential to succeed. For example, in the BlackBoard classroom management system, instructors can elect to track students' access of both general areas of the class's site and individual files posted for download (e.g., exam study guides). By collecting usage statistics, the instructor can analyze that behavior's relationship to student performance (e.g., exam scores). If the students who did poorly on the exam did not access the study guide, that information can be included in a reminder about downloading study guides for upcoming exams to increase compliance. However, if students who did access the study guide did poorly on the exam, it might behoove the instructor to examine the study guide to ensure that it is truly representative of the kinds of skills or information the exam covered. These small investigations can do much to dispel the role of conjecture in determining what elements of a course might benefit from revision, and some of the new tools at the instructors' disposal simplify the process.

Another factor to consider when including innovations that can improve students' learning outcomes is what static resources can be provided to further scaffold their learning process. For instance, many instructors will provide examples of assignments, either exemplary or otherwise, to demonstrate how the assignment should be completed to earn the desired grade. The samples may be graded or ungraded, but students who look at the examples will better understand what is expected of them. The idea behind this is not to tell them what the answer is, but to improve students' understanding of the expectations, and thus increase their chances for success. One thing that sometimes happens when instructors provide extra resources, however, is that some students will not take advantage of them. That self-defeating behavior is truly frustrating for some instructors, but the students who do take advantage of the tools, and subsequently benefit, make it worthwhile.

A particularly valuable innovation is one that increases instructor efficiency without any loss of instructional quality. The Internet has made innovations of this type easily available to teachers at any level. From institutionally hosted classroom management systems to independent Web sites instructors set up for their own classes, online resources are a boon. Technology that automates processes falls into this category. For instance, several online systems are available that allow students to take quizzes outside of class, and have them automatically graded and entered into the grade book. This tool is good for JITT methods, particularly. Another example of a way to automate a process to augment instructor efficiency is using a word processor to grade written assignments. The time involved in grading assignments partially depends on how much feedback the instructor plans to give for each assignment. Writing comments to foster improvement and detailed explanations of grading decisions takes a lot of time. If the instructor has students turn in assignments electronically, the grading process can be streamlined by using a set of preprepared, typed remarks and notes to copy and paste into the file. For example, Microsoft Word's clipboard feature holds up to 24 items at a time, and each can be chosen and pasted into documents as needed with the click of a mouse. This strategy ensures that comments are consistent across classes or assignments, allows instructors to ascertain the

most common errors, keeps a record of what is said on each paper, and avoids abbreviations or shorthand that might be necessary if comments were going to be written out by hand.

Finally, teachers can save time by talking with their colleagues and sharing ideas for short-cuts or time-savers that they have developed or discovered; the whole department benefits if teachers do not have to reinvent the wheel for themselves. One of the author's colleagues shared a spreadsheet program she designed for grading lengthy written assignments and calculating the grade automatically. In one sheet, a set of preprepared comments, compliments, and critiques was written out and assigned numeric values according to the grading rubric (i.e., a three-point deduction for APA style errors, 8 of 10 points for a reasonably well-written introduction, etc.). The instructor imported the class roster into another linked sheet. By selecting the comments that applied (using a true/false contingency formula), the instructor could prepare a personalized printout of the feedback for the assignment, with the score automatically calculated and reinserted into the roster for uploading into the online grade book. Although this tool required some time to prepare the first time, it more than made up for it with the time saved grading large piles of essays, and was especially valuable in cases where there was more than one person grading the assignment (i.e., an instructor working with a TA). These types of innovations, especially shared with colleagues, are incredibly valuable for increasing instructor efficiency.

Introduction of any innovation can be seen as an intervention geared toward those the instructor decides need help. There are two ways to approach interventions to address specific issues in the class. The first way to conceptualize interventions is as a way to avoid failure; is the goal is to have fewer students earn bad grades? Along this line, an instructor might use a systematic analysis of learning outcomes to isolate possible sources of confusion, or identify students' behaviors that might be impairing their success. Another approach to intervention is to seek success, in terms of improving methods that may work well enough, but could work better. The difference between being a good teacher versus not being a bad teacher is complex. Whether attempting to fix existing problems, or trying something new to make a course even better, the key is to act as a scientific practitioner of teaching (McGovern & Miller, 2008; Savory et al., 2007).

Research on Teaching. Methodical reflection on, and assessment of, teaching efficacy is as important as the scholarly approach to research (Savory et al., 2007). There is a false equivalence in the literature between the ideas of scholarly teaching and the scholarship of teaching and learning (Smith, 2008). For some, the sense is that scholarly teaching, wherein instructors conduct systematic analysis of their students' learning outcomes, is done "on the side" of their normal responsibilities, and therefore goes largely unrewarded (Smith). On the other hand, the scholarship of teaching and learning is widely recognized as a legitimate field of study. Smith contends that teachers typically do some kind of analysis of learning outcomes, but do not do so rigorously enough to count as scholarship (by, for example, including control groups). Scholarly teaching does not become scholarship until it is subjected to peer review and publication (Smith).

When using the classroom as a research venue, the same principles of protocol and ethics apply. The process should begin with a literature review, include necessary design elements such as randomization, if possible, data collection, and presentation of conclusions for critical review and dissemination (Smith, 2008). Teachers who know that they are going to be analyzing students' learning outcomes must attain consent from their students in order to include their information in research that might appear in publications (Savory et al., 2007). This must be done with care to avoid being coercive; students are a captive and vulnerable population, in that they may

feel pressured to comply or risk their grade in the course. According to the standards set by the institution's Institutional Review Board (IRB), data collected over the normal course of conducting a class might be exempt from review, but it behooves the instructor to check published parameters for use before making any assumptions. If the instructor is conducting the research for his or her personal growth, the IRB may not require a review (Savory et al.). Likely, the IRB will require that any information (i.e., grades) be de-identified before inclusion in research, to ensure the anonymity of the student participants, if the results are meant to be published.

Expert teachers wishing to introduce innovations or interventions into their courses may want to formally experiment with it, in order to increase scientific rigor (LoSchiavo, Shatz, & Poling, 2008; Savory et al., 2007). There are different ways to do this type of manipulation. First, a teacher who has more than one section of the same course might have students in one experience the intervention, and compare them to their peers in the other section as a control. The possible downsides of this strategy are both methodological and ethical in nature. First, in order to conduct proper experiments, there must be random assignment of participants to each condition (LoSchiavo et al., 2008). Students who enroll in different sections of the same course may differ from each other in some systematic way, which would introduce confounds to any conclusions drawn from the results. Furthermore, if a teacher thinks that he or she knows how to provide a better learning experience for his or her students, then it should not be withheld from some students while others benefit from it (Tomcho & Foels, 2008). Within-subjects designs, such as pretests and posttests, are a way to circumnavigate ethical quandaries of this nature (Tomcho & Foels). LoSchiavo et al. extol the virtues of online technology (such as web-based course management systems like BlackBoard) for allowing teachers to engineer random assignment or management of groups. They also suggest that in-class manipulation of interventions can be done by splitting a class period in half and having half the students attend one or the other portion. Another way to experimentally manipulate interventions is to do so across semesters, using a longitudinal comparison for the baseline measurement or control condition (Gibson, 1992). In this case, the instructor offers the same quality of educational opportunities to all of his or her students, without sacrificing the opportunity to test the efficacy of a new method empirically. Finally, when class time or size renders experimentation impractical, individual demonstrations or activities can be tested on volunteers drawn from a departmental participant pool of students (LoSchiavo et al.).

While disagreement remains over the ability of student evaluations to determine a teacher's quality, course evaluations do offer a wealth of information that can be mined for analysis (Gibson, 1992). Summative information, from statistical analysis of students' ratings for different elements or characteristics of the course or instructor, identify whether there is a problem that needs to be addressed (Boice, 1992). The formative information gleaned from student evaluations, including responses to open-ended questions, can identify areas in need of attention (Gibson). In the case of experimentation with new methods, course evaluations can serve as a source of students' subjective feedback on their experience (Boice), in contrast to objective measures of learning outcomes in the form of grades and scores (Tomcho & Foels, 2008, for a discussion on the utility of exam scores as dependent variables). Instructors should tailor their evaluations to probe the specifics of the course, instead of relying upon the standard and sometimes rather general evaluations used by default in the department.

Instructors engaged in scholarly teaching can further benefit from in-house grants for developing teaching innovations. Many schools set aside funds for teachers to use in pursuit of improving their methods and techniques or developing new courses. For instance, the authors'

institution offers instructors funding for developing new online summer courses, as the needs of modern students prompt the university to further diversify its course offerings. Institutional support for these endeavors may encourage more experienced instructors to adopt an evidence-based approach to their teaching, which they might not have otherwise been motivated to do. These small grants can be seeds for developing long-term programs of research, which can then yield publications and conference presentation opportunities. The more teachers think of teaching as a scholarly activity, the better their students are served.

Programs for Teaching Development. In addition to funding for teaching research, many institutions offer formal programs for their teachers' professional teaching development (Boice, 1992; Gibson, 1992). This support might manifest as a peer-review network that provides teachers with an organized method for acquiring special student evaluations in the forms of mid-semester questionnaires administered by a third party, colleagues willing to observe classes and offer feedback, and feedback on teachers' reflections and materials. Boice recommends that campus initiatives to improve teaching quality begin with basic skills, teach critical thinking and evidence-based approaches, and offer advice for developing resilience to disappointment. Teacher development programs will also generally supply instruction as to how to go about making learning outcomes more visible. One of the tools that is helpful in tracking growth over time is the teaching portfolio (Bernstein, Burnett, Goodburn, & Savory, 2006). Portfolios are typically overarching collections across a teacher's entire repertoire of courses and materials, including evidence of the efficacy of those methods in the form of self-evaluation and assessment of learning outcomes (Bernstein et al., 2006). Portfolios also include summary statistics from student evaluations, or brief entries describing the development of certain techniques. In contrast, a narrower course portfolio is a collection of the elements of a single course (e.g., syllabus, assignments, etc.), including the reflections on how the course design, structure of elements, and assessments all worked toward student learning (Bernstein et al.). It is useful for peer reviews of teaching efficacy because it comprises the whole picture of what went on during a single course. As part of a peer-review process, course portfolios can be used across disciplines to further or deepen conversations about different methods, objectives, and assessments that best promote student learning for individual teachers or for departments or institutions looking for evidence to support their procedures and projected student learning outcomes. As a tool, portfolios are useful either for instructors' independent professional development, or for use in promotion or award considerations.

21.4 Summary

Although teaching is sometimes treated as the least important activity on an academic's priority list, as a component of any academic clinician's professional responsibilities, teaching should be undertaken with the same kind of purposeful rigor with which research, service, and clinical practice are pursued. It takes considerable time, effort, and heart to acquire the repertoire of materials, abilities, and habits of a competent teacher. Basic skills underlie the foundation of competence, while more complex and sophisticated teaching methods and materials can be built up from that establishment as professionals gain experience. At the same time, high-quality teaching may come more naturally for clinicians than for other types of psychologists. After all, like clinical work, teaching is all about learning to listen and supply useful information at useful times. In that respect, teaching can be viewed as an extension of clinical skills, and

clinicians should take full advantage of those skills as they develop a teaching approach. Moreover, clinicians know the value of basing their practice decisions on the research literature, and so, again, need only apply this to teaching to realize the importance of keeping abreast with changes and improvement in teaching practices. In other words, the behaviors that comprise teaching competency should be practiced, informed by empirical evidence, and subject to the same kind of scrutiny as other scholarly work.

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22 Management and Administration

Philinda S. Hutchings · Deborah Lewis · Ruchi Bhargava

Abstract: Clinical psychology competencies in management and administration are often considered to develop in advanced stages of careers, but these competencies are developing at all stages. In addition, although management and administrative functions are often considered ancillary to the practice of clinical psychology and are not acquired through formal instruction, they are central to successful practice; regardless of skill in assessment and intervention, for example, the psychologist who does not perform well in the management and administrative functions of practice will have difficulties. Four areas of competency in management and administration are described; planning and organizing work; administration; leadership; and executive management. Planning and organizing work includes abilities to plan and organize tasks for self and for others, skills and activities in time management, professionalism, and adaptation to change. Administration includes knowledge and skills in business, marketing, and finance, organizational and community systems, ethical and legal policies and procedures, quality improvement, and information management. Leadership includes vision and mission development, skill in providing guidance and direction, and characteristics and attitudes appropriate for leadership in clinical psychology. Executive management includes skills in management of personnel and resources, provision of oversight, team development, and organization and systems management. The knowledge, skills, and activities within each of these areas are described and discussed at basic and advanced levels of competence.

22.1 Overview

Students in clinical psychology training programs rarely think about developing skills in management and administration, since their classes and assignments do not typically focus on this area. They study assessment and intervention skills, research and evaluation, and integration of science and practice. In fact, sometimes psychologists receive management and leadership training after they are placed in such positions rather than in graduate school (Picano & Blusewicz, 2003). Skills in management and administration are sometimes regarded as implicit in or incidental to becoming a skilled practitioner or researcher, but the focus and skill in client care are very different than those in organizational leadership and management (McAlearney, Fisher, Heiser, Robbins, & Kellerher, 2005). Even though our education and training programs have not kept pace with some of the dynamic shifts in the business of health care as they concentrate on training practice and research skills (Hoge, Tondora, & Marrelli, 2005), there is a growing recognition that competency in management and administration is necessary, not just because psychologists move into management roles in health-care organizations (Picano & Blusewicz), but in order to effectively practice (American Psychological Association [APA], 2007a; Hatcher & Lassiter, 2006; National Council of Schools and Programs of Professional Psychology [NCSPP], 2007). This part of a psychologist's professional role can

make or break a practitioner, because if the practice is not well managed, even a skilled clinician cannot continue to function. There are also implications for agencies that hire professional psychologists presuming that they have expertise in managing other mental health professionals, but only to find that their doctoral programs did not include training in management.

Since professional psychologists are more often called upon to assume management and administration roles (Hoge et al., 2005; Picano & Blusewicz, 2003), sometimes, soon after completing the doctoral degree, if specific training in management and administration skills were included in the doctoral curriculum, students would be better prepared to function in these roles. Some doctoral programs may offer electives in such areas, but exposure to the body of knowledge in this area is not a requirement for APA accreditation (APA, 2007b). In recognition of the fact that addition of at least practice management skills would be very useful to early career professional psychologists, NCSPP, APA Practice Directorate, and APA Division 42 (Independent Practice) collaborated in 2007–2008 to create a model syllabus on practice management, listing topics and resources (NCSPP, 2008). Some of the topics include entrepreneurship and business strategies, creation of a mission statement and business plan, business strategies and decisions for private practice, marketing strategies, practice finances and maintenance, office space, policy issues, documents and record-keeping, insurance issues, health policy issues, technology and communications, and preparation for leadership and administrative positions.

Some students may question the need to acquire knowledge or skill in management and administration, since at the beginning of their graduate education, they do not aspire to leadership or management positions. Some may even question whether everyone will be able to acquire these skills or will have the temperament for such positions. This is true even in the more traditional skill sets of the professional psychologist. All students study assessment and intervention skills, even when they practice, some will only use certain tests and not others, some will limit their practice to psychotherapy, while others pursue neuropsychological assessment, and some will engage in a broader range of assessment and intervention services. We assert that all students need to acquire a basic set of skills for entry to practice, and we think it is likely that many professional psychologists will go on to acquire at least a subset of advanced competency in management and administration as they advance in their careers. At the very least, they should be able to identify and promote good management and administration practices regardless of the setting or position of employment.

While the inclusion of some management and administration knowledge and skill development in the doctoral curriculum may require a change of attitude and/or a change in the training of faculty members, we do not propose that all professional psychologists become experts in business administration. Students of professional psychology enter the field typically because they are motivated to help people rather than because they are interested in business or finance. However, service provision is a business, and some business acumen is required in order for even the most altruistic service provider to continue to provide services.

Competency has been defined as "a measurable human capability required for effective performance" (Hoge et al., 2005, p. 511). Perhaps the earliest attempt to define and measure competency in administrative and management skills was the Chinese empire system of civil service examinations over 3,000 years ago. In modern times, early descriptions of management and administration came from the realm of business and manufacture during the industrial revolution (Russakoff, 2003). Administrative theories continued to develop throughout the

20th century, and the tasks of management and administration included "planning, organizing, staffing, directing, coordinating, reporting and budgeting" (Russakoff, p. 57). The application of administrative theories to health-care services must accommodate changes from management of manufacture by skilled or unskilled labor to the management of service provision by professionals, but the tasks described are quite similar. The definitions of the terms management, administration, and leadership are often used interchangeably, but there are some differences between them. Administration generally refers to routine tasks associated with work, while management implies a broader area of responsibility, often including oversight of others (Veenhuis, 2003). Leadership implies venturing into the unknown territory and/or motivating workers, while management applies to maintenance of established endeavors. Yet, leadership is often included in descriptions of management: "The practice of management is in essence leading, planning, organizing, and maintaining operations; monitoring results; and making corrections as necessary" (Veenhuis, p. 103).

There are many descriptions of the activities of management and administration. We have organized them into four areas of competency: (1) planning and organizing work; (2) administration; (3) leadership; and (4) executive management. There are tasks that overlap more than one of these competency areas, but we describe the characteristics of each area as distinct from the others. After a brief description, we provide a bulleted summary of the basic and expert competencies in these areas. Then, detailed descriptions and examples of the basic and expert competencies in each area are provided.

22.1.1 Planning and Organizing Competency Summary

Planning and Organizing includes timely completion of tasks, time management, prioritization of work, strategic planning, delegation of tasks and oversight of workers, implementation of work toward goals, and organization of the components of work. The design of work strategies in order to complete tasks by their deadlines requires orientation toward the future and recognition of the amount of time to be devoted to the components of the tasks (Veenhuis, 2003). At its most basic level, this may include arriving promptly for appointments with clients and organizing the daily workload with time for writing therapy notes and reports (Hatcher & Lassiter, 2006). Setting priorities for task completion and effectively using the time available require recognition of the relative importance of practice components and the responsiveness to changing priorities (NHS Education for Scotland [NES], 2006). Strategic planning involves predicting trends, planning for future development, and identifying the resources required to accomplish goals and objectives (Veenhuis). Planning and organizing work for other workers involves assignment and delegation of tasks, and this includes oversight of accomplishments. Awareness of organizational requirements and implementing tasks focused on goals is an integral function of planning and organizing, similar to a process called "initiating structure," described in early industrial leadership studies (Steger, Woodhouse, & Goocey, 1973).

Planning component:
- Basic competency includes the ability to plan one's own work, understand the purpose of meetings, and participate appropriately.
- Expert competency includes the ability to plan work for others, formulate strategic plans, plan and conduct meetings, and link structure and function.

Organizing component:
- Basic competency includes the ability to organize and manage one's own workload and balance self-care with work demands.
- Expert competency includes the ability to organize and coordinate work for others and initiate structure.

Professionalism component:
- Basic competency includes the ability to complete tasks in time and comply with policies and procedures.
- Expert competency includes the ability to set reasonable deadlines for others and create policies and procedures.

Flexibility component:
- Basic competency includes the ability to adapt to change.
- Expert competency includes the ability to forecast change and plan for contingencies.

22.1.2 Administration Competency Summary

Administration includes financial and fiscal management issues, economics, budget development and monitoring, information management, regulations, standards, and compliance oversight. The skills of administration are found at all levels of management, including the supervisory level, program management level, and executive management level (Patti, 1983). Paying bills and collecting fees are basic tasks in fiscal management (Wiger, 2007). More advanced skills may pertain to the ability to develop a budget and monitor revenue and expenditures, which are central to the financial health of a practice or organization. Providing information to the public and potential referral sources about services in marketing strategies and creating maintaining service records are skills that the advanced administrator should obtain. Additionally, there are a variety of standards and regulations that apply to practice and record-keeping (APA, 2007c), for accreditation of organizations and electronic communication of records and billing (Wiger). Policies and procedures of the organization and funding sources must be recognized, followed, and communicated to employees. Administration includes oversight of compliance with various standards and regulations, policies and procedures, and quality control and improvement principles.

Business, marketing, and finance component:
- Basic competency includes knowledge of health-care fees, billing and reimbursement, the ability to inform the public about services, understand liability and other insurance, and function within a budget and understand a business plan.
- Expert competency includes skills in budgeting and financial management, knowledge of accounting principles, market research and advertising, ability to maintain insurance and financial records, entrepreneurial skills, and ability to develop contracts.

Organization and community systems component:
- Basic competency includes understanding of organizational function and hierarchy.
- Expert competency includes ability to develop organizational function, hierarchy, and governance, establish systems, maintain and monitor operations, direct organizations, and cooperate with communities.

Policies and procedures, ethical and legal issues component:
- Basic competency includes the ability to conform to policies and procedures and guidelines, and knowledge of legal and ethical requirements.
- Expert competency includes the ability to develop policies and procedures in accordance with the ethical and legal requirements, knowledge of public policy, and the ability to integrate these in program planning and implementation.

Quality improvement component:
- Basic competency includes the ability to use information to monitor and improve quality and conduct individual outcome assessment.
- Expert competency includes the ability to conduct program evaluation, develop record-keeping methods that aid monitoring of quality, and conduct organizational outcome assessment.

Information management component:
- Basic competency includes information literacy, the ability to organize and present information, and verbal and written communication skills.
- Expert competency includes the ability to develop information systems and implement lines of communication throughout organizations.

22.1.3 Leadership Competency Summary

Leadership focuses on development of vision, values, and mission; goal-setting; policy development; and guidance or motivation of workers. Developing a clear vision of the goals to be achieved and communicating that vision to others with a set of values are the responsibilities of a leader (Reid & Reid, 2003). Then, the leader translates the vision to a set of goals to be accomplished and motivates others to accomplish them. Leadership also involves team-building and inspiration in task-oriented activities, and responsibility or accountability for the outcomes. Personal characteristics are important because effective leadership requires engendering trust; trust must be earned. Leaders are empowered by followers (Russakoff, 2003), and must be mindful that any power or authority to lead depends upon the support of followers.

There is a much larger body of literature on styles of leadership which is beyond the scope of this chapter. Although leadership style is important, especially to followers, and has been studied extensively, the focus of this chapter will be on the leadership competencies in psychology rather than on the styles or personality characteristics of leaders.

Vision, mission, and purpose component:
- Basic competency includes the ability to articulate mission, and set and pursue goals.
- Expert competency includes the ability to develop and create missions, goals, and objectives, and to motivate others.

Guidance component:
- Basic competency includes the ability to provide direction to peers and participate in policy development and change of public policy.
- Expert competency includes the ability to provide direction to others, build teams, coordinate multidisciplinary efforts, and develop skills in advocacy.

Leadership characteristics component:
- Basic competency includes the ability to be trustworthy, reliable, and resourceful.
- Expert competency includes the ability to engender trust, be consistent, recognize achievement and performance, and resolve conflicts.

22.1.4 Executive Management Competency Summary

Executive Management has to do with oversight and development of other workers and facilities. It includes resource management, personnel, human resources, facilities management and maintenance, interagency and consumer relations, and systems management. Executive management is not to be confused with clinical supervision, which involves training clinicians to develop increasing skills in psychological service delivery. Executive management involves supervision and oversight of operations, professionals and other staff. There are many styles of management (O'Donohue & Fisher, 1999) that may describe different managers in various settings, some of which are more effective than others, but regardless of the style, executive managers are responsible for similar activities.

Human resources and personnel component:
- Basic competency includes the ability to recognize staff roles and functions, manage one's own career, and negotiate one's own compensation.
- Expert competency includes the ability to recruit credential staff, and negotiate benefits and compensation, promotion, discipline, conflict resolution and termination.

Oversight and development component:
- Basic competency includes the ability to provide direction appropriately and promote individual conflict resolution.
- Expert competency includes the ability to train and evaluate staff and promote systems conflict resolution.

Team development and management component:
- Basic competency includes the ability to recognize contributions of team members and work cooperatively with others.
- Expert competency includes the ability to build and manage interdisciplinary teams, set expectations for performance, and monitor progress.

Organizational and systems management component:
- Basic competency includes the ability to use resources wisely and function within organizational structures.
- Expert competency includes the ability to obtain, allocate, and shepherd resources, and implement organizational structures and hierarchy.

22.2   Basic Competencies

22.2.1 Planning and Organizing

In the area of planning and organization, there are several essential skills that should be demonstrated at the basic level. Psychologists need to be able to develop plans to accomplish goals,

including identifying the steps necessary to reach goals and the order in which they should be attempted and achieved. Then they need to recognize the amount of work they need to accomplish and plan their time accordingly. This forms the rudiment of strategic planning, and understanding the purpose of strategic planning is one of the basic competencies expected of psychologists before entry to practice (Hatcher & Lassiter, 2006). Planning is not as simple as it may appear on the face, even though most students in psychology have been exposed to the process. Students are aware that they need to take a series of sequenced coursework and activities in order to receive the doctoral degree in professional psychology, but they are rarely aware of how the sequence and content of the coursework and activities were assembled in order to produce a professional psychologist with the requisite knowledge, skills, and attitudes. This is a rather complex goal, one usually planned by experts, but beginning psychologists have had some experience in similar tasks. They have often had the opportunity to plan scholarly works, such as dissertations. Planning a dissertation requires identifying resources, addressing a question, developing a method to test the question, carrying out the method, and examining the result. In both large and small tasks, planning is an essential skill.

The ability to plan applies to both individual efforts and cooperative efforts, such as teamwork and meetings. Understanding the purpose and structure of meetings and participating appropriately and constructively in order to accomplish tasks are included in planning. Students and psychologists need to be prepared for meetings. Such preparation may include gathering and/or presenting needed information or materials, using the meeting time efficiently by addressing the tasks at hand and not distracting the participants with irrelevant conversation, and offering information and skills to promote task completion. One might expect that the ability to use time wisely is implicit in the functioning of anyone who has managed to complete college studies, but many training activities and priorities are planned for students. New practitioners may find themselves having to structure their professional obligations for the first time, and they will need to set priorities and organize their own time to accomplish their assigned tasks.

At its most basic level, organizational skills including organizing one's day, including setting time for essential activities, such as meeting with clients, recording notes, writing reports, and for rest and recovery (Hatcher & Lassiter, 2006). Beyond organizing a day's activities, long-term and short-term scheduling ability is required, such as planning for vacations, conferences, meetings, and budgeting enough time to accomplish necessary tasks. Students often learn to budget time for reading, writing professional papers, and completing other class assignments. This requires some self-awareness and knowledge of how long it takes to accomplish certain tasks. Students are often encouraged to record course assignments in a day planner, and work backward from the deadlines to schedule the time to accomplish parts or stages of the assignments. Advanced students often encounter some difficulty structuring their time effectively when faced with relatively unstructured tasks, such as writing a dissertation. Scheduling and budgeting time in order to meet educational demands are required to complete the degree.

Organizing time and activity in order to meet demands of the agency or practice continues through the levels of training to the level entry to practice (APA, 2007a), and requires the ability to manage one's own workload (NES, 2006). Students may find it difficult to balance the demands of work and self-care, motivate themselves, and create their own structure, but at the level of entry to practice, psychologists are expected to be able to effectively organize their time and work. Practicing psychologists may need to adjust their schedules for crises and unexpected demands, such as family emergencies, urgent client needs, and even weather and traffic disruptions. Flexibility and accountability are likely to be required.

Planning and organizing also requires a set of skills that might be described as professional behavior. Basic competency in these skills requires timely completion of tasks, meeting deadlines for assignment completion, and arriving in time for appointments and meetings (Hatcher & Lassiter, 2006). It also requires prompt response to the requests and demands of the supervisor, agency, or third parties (APA, 2007a). Psychologists should develop a disciplined approach to writing and maintaining records from the point of entry to practice (Hatcher & Lassiter), whether they choose to work in an agency or in private practice. Although there may be no rules or ethical guidelines about time limits for documentation, evaluation reports should be written and placed in the chart promptly, certainly within the time frame that constitutes the standard for the area of practice. Psychotherapy progress notes are often most productive and accurate, if written immediately after the session, and certainly by the next day. Some jurisdictions may impose deadlines for such documentation, e.g., Arizona requires that progress notes be written on the day that service is delivered (Arizona Administrative Code, R9–20–211). Awareness of and compliance with the APA Record-Keeping Guidelines (APA, 2007c) as well as federal, state, and agency policies and procedures are included in the basic competencies of beginning practitioners.

Students often find documentation requirements rather daunting, because their lack of familiarity with the process means that they take longer to write notes and reports than experienced psychologists. If they get into the habit of documenting their services promptly, they are likely to continue to do so as they become more expert and advanced in their training. If they fail to do so, they run the risk of sanctions that interfere with their practice and professional development. Practitioners who fail to comply with documentation deadlines may not receive repeat referrals, have delayed payment for services, or even have privileges suspended or revoked, and may face other penalties. So, development of a disciplined approach to documentation is a basic competency expected by entry to practice.

Finally, plans change in response to changing markets, strategies, agencies, and supervisors. The ability to adapt to changes in plans, accommodate interruptions, and remain focused on task completion is a basic competency expected of psychologists (Russakoff, 2003). Students often encounter such changes in the process of completing a dissertation or other scholarly product. Such tasks often seem simple and straightforward in their early development, but students almost inevitably encounter difficulties in the course of their studies and are required to adjust the course in a variety of ways. An attitude of persistence in the face of obstacles and adversity is essential if one is to be successful.

22.2.2 Administration

Administrative skills keep organizations functioning effectively, involving all of the necessary but ancillary activities surrounding the central endeavor; these activities include business, marketing and finance, organizational and community systems, ethics, legal issues and policies, quality improvement of service delivery, and information management. There are several foundational skills and abilities that contribute to all administrative efforts, including good oral and written communication, interpersonal skills, judgment, and understanding of cultural and individual differences.

Most students of psychology receive little formal training or information about business principles, marketing strategies, or financial management. Most early development in this

competency comes from supervised practice and experience, or "the school of hard knocks." Basic competency in this area includes knowledge of consumers of psychological services and activities such as answering the phone, setting up appointments for services, setting, negotiating, and collecting fees and payments, and paying bills (Gaver, 2000; Hatcher & Lassiter, 2006; Wiger, 2007). Understanding of health-care insurance and third-party payer requirements for records, billing, and reimbursement is essential at the level of entry to practice. Beginning practitioners must have a basic understanding of the financial operations of psychological services, how to set fees for service, how money is obtained, what is required to collect it, and how it is disbursed, as a business model for health care (Hatcher & Lassiter; Kiesler, 1999; McAlearney et al., 2005; NCSPP, 2007). Students are often uncomfortable with the idea of talking to clients about fees for service. They are focused on helping clients feel better or overcome difficulties, and to many students, talk of fees, billings, and collections seem far removed and even antagonistic to the clinical process. However, with practice and supervision, they can overcome this discomfort, and find that negotiating fees and payments can be as straightforward and useful as ensuring informed consent for treatment and sharing records and information with other providers; it is not antagonistic to the clinical process, but is a necessary activity to allow the clinical process to take place. One colleague joked that the term "professional psychologist" was a good one, because it implies that the psychologist is paid, as opposed to an "amateur psychologist," who presumably provides services as a hobby. Psychologists often deal with other sources of payment and they need to be able to understand and fulfill contracts for such services, e.g., with schools, attorneys, or governmental agencies.

Practitioners must also have a basic understanding of the purpose and importance of liability insurance and how to maintain it (Gaver, 2000). There are other basic costs of operating a practice, and budgeting expenses becomes an important facet of business. Basic financial competency includes the ability to function within a budget, given an understanding that expenditures must not exceed revenue, and identification of resources in order to develop a business plan (APA, 2007a). A basic business plan includes these components: the services or product to be offered, the consumers identified, fees set and revenues identified, resources necessary to offer services or product, and the costs of service provision or production. Although few beginning psychologists would assert that they have the knowledge or skill to develop a business plan, most of them often do as they open a practice or go into practice with a group.

Making potential clients aware of services offered forms the rudiments of marketing. Basic competency in marketing includes an understanding of referral sources and the information that must be provided to them, including levels of training and areas of practice competency. Providers must learn how to confidently describe the level and quality of their services, appropriately evaluating their skills and articulating descriptions of the range, scope, and availability of services offered. Early career psychologists may need to overcome reticence and a degree of shyness to be able to market a practice; learning to "toot one's own horn" is not bragging. Accurate and descriptive marketing may require beginning psychologists to present their strengths to referral sources, an activity outside of their comfort zone. Some awareness of marketing methods is necessary, in order to attract clients to the services offered (Gaver, 2000), and may include applying for membership on insurance panels, developing brochures or fliers to describe services, and developing strategies to distribute brochures. It also requires understanding of ethical and legal guidelines for advertising. Several sections of the ethical principles of psychologists and code of conduct refer to standards on paid and unpaid advertising, media presentations, and information presented on Web sites and through electronic

means (APA, 2002; 5.01–5.06). Truthfulness and accuracy are what are expected in curriculum vitae, directory listings, brochures, printed materials, and oral presentations.

In order to provide essential and effective services, psychologists must have a basic understanding of the organizational and/or community system within which they work (Fraser, 2003). In a clinic or institutional setting, an understanding of the system includes how patients/clients enter, register, wait, turn in forms, make appointments and payments, and exit. It also includes awareness of the system hierarchy and contributions of other professionals, staff, consultants, and others. At the point of entry to practice, psychologists should be aware of how their work fits into a larger schema of community resources, and have some understanding of where clients can obtain needed services that the psychologist does not provide. Psychologists should have some basic understanding of group and organizational process (Fraser).

Within the profession of psychology, there are ethical and legal principles designed to guide behavior, creating boundaries and structure, and within every organizational setting, there are standards and policies, regulations, and procedures. One of the first things new employees are likely to be required to do is to read the organization's policies and procedures manual. Knowledge of policies and procedures, ethical issues, and the ability to conform one's behavior and practices to these rules is a basic competency (APA, 2007a; Wiger, 2007). At the level of entry to practice, it is essential that psychologists have knowledge of the legal and ethical requirements for maintenance of records (NES, 2006) and the APA guidelines for keeping records (APA, 2007c). They must also be familiar with legal and ethical requirements for delivery of professional services. This may include case law and risk management strategies (NCSPP, 2007). In general, at the point of entry to practice, psychologists should be familiar with the principles and regulations that apply to practice and be prepared to function in compliance with them, avoiding transgressions of omission and commission (Scott, 2000), and able to integrate these principles and regulations into implementation of programs (NCSPP).

Quality improvement principles, especially as applied to service delivery, are included in administrative competencies. At the most basic level, psychologists should be able to monitor the efficacy of their services and take steps to improve the quality of services as indicated. This may include devising methods of measurement, setting goals for training and learning, monitoring and evaluating outcomes, and incorporating process changes in service delivery to improve outcomes of their own services (World Health Organization [WHO], 2003). While they should be able to keep accurate records as discussed earlier, they also should be able to use documentation and records to assist them in quality improvement efforts (Kapp & Mossman, 2000). Students may be introduced to this process as they are encouraged to monitor the progress of their clients in psychotherapy or other interventions, which is basically a quality improvement strategy. If the client does not improve, the intervention should be modified, and if the client does improve, the intervention may be maintained. Basic quality improvement skills involve generalizing this process to the aggregate of clients or the organizational system. Applied to the aggregate, monitoring progress may suggest continuing education or training in some area of practice, modification of practice strategies, or modification of organizational systems.

Information management has become an important area of administrative competency with the expansion of computer and information technology. While personal and professional communication skills remain important components of all professional services (Veenhuis, 2003; Wiger, 2007), information literacy and the effective use of technology as applied to professional practice have become essential (Levin, Hanson, & Kuppin, 2003). Many organizations

are converting to electronic records. Although small organizations and private practices continue to use paper records, many functions have become computerized. Basic understanding of computer information systems and management of information to facilitate organizational functioning (Freeman, 1999) and knowledge of regulations governing electronic records are part of administrative competency for beginning practitioners. Although many students and beginning professionals have far more sophisticated understanding and facility with computer technology than their older supervisors, they may need to learn to use the computer information technology in the discourse community of psychology. Some students and early career psychologists have had to deal with removal of embarrassing photos or information from public access Web sites as they move into professional positions, and may have to modify their use of casual language and emoticon symbols in professional communications.

At the beginning levels, skills for effective communication in addressing and resolving conflicts with peers and supervisors (Patti, 1983) and to ensure clear understanding of administrative tasks as well as professional presentations and reports (Hatcher & Lassiter, 2006; Wiger, 2007) are expected. Working groups must establish lines of communication in order to cooperatively accomplish their assigned tasks or their goals and objectives. Conflicts naturally and inevitably arise, and although effective communication does not ensure resolution, it is necessary to attempt resolution.

22.2.3 Leadership

Leadership is usually seen and developed at an advanced level, and most students in psychology training programs do not think of themselves as leaders or as developing leadership skills. However, the groundwork of leadership competency is developed relatively early. Leadership involves moving into new areas or activities, rather than maintaining familiar or established ones. One may think of leadership as involving a large number of followers, but leaders may lead only one or a few. The number of followers does not determine the skills or functions of the leaders, and leaders may also be followers of other leaders, in a chain, hierarchy, or cooperative organization of responsibility.

Since part of leadership involves creating a vision, purpose, or mission for psychological services, basic competency in leadership requires the ability to articulate the primary mission of the organization (NCSPP, 2007), and to reconcile this mission with personal goals. As a student embarks on their supervised training experience in practicum in a state hospital, for example, the student needs to understand that the mission of the hospital is to care for the seriously mentally ill residents of the state. The student needs to be able to understand how supervised training in this environment with these patients serves his/her personal goal of developing skills in professional psychology. It is not always easy for the student to understand this, especially if his/her personal clinical ambitions lie with other clinical populations or services. But eventually, the student usually realizes that some basic clinical skills are ubiquitous and can be learned in almost any setting, such as the ability to develop rapport, conduct a clinical interview, and develop a treatment plan and implement it.

Even in their early training, psychologists should be motivated and responsive, understand the context of work and training, establish and maintain a positive attitude, and be responsive to internal and external pressures (Russakoff, 2003). If students entering doctoral programs listed all the readings, assignments, tasks, papers, examinations, and supervised practice

training experiences they would need to complete by the end of their doctoral training, would they embark upon the venture? That might be overwhelming, so most students limit their lists of tasks to one term or year at a time. Still, it may be hard for some to maintain their focus on the reasons they set upon the course in the beginning, to become a professional psychologist. The ability to maintain focus upon the mission and goals and persevere in the face of obstacles is one of the necessary qualities of leadership. It is equally important in developing a practice in early career stage as it is in graduate training.

Most students in training voice relatively nonspecific career goals, such as the practice of psychology, work with adolescents, or teach psychology. However, by the point of entry to practice, they are able to formulate more specific goals, such as developing a hospital and out-patient practice, focusing on children and adolescents, or teaching Developmental Psychology courses as an adjunct professor at a local college. They also may be able to develop a mission for an organization or a group, and set specific goals for that purpose as well as for their personal careers. Students often involve themselves in service organizations and efforts, volunteering to organize events to raise funds for charitable purposes, to advocate for improved conditions, or to accomplish related goals. For example, a student in practicum at a women's prison became aware of the need for education in breast cancer screening and treatment as she was providing psychotherapy to a woman recently diagnosed with breast cancer. The student obtained permission from the prison administrators and contacted the local cancer society to arrange for a volunteer to come to the prison regularly to talk to the inmates about self-examination, diagnosis, and treatment of breast cancer. Recognizing and responding to a need and setting specific goals to accomplish a mission or purpose is a basic leadership competency.

Leadership involves providing guidance and direction, and basic competency in leadership includes the capability to provide direction to peers and staff when appropriate (APA, 2007a). For students, this may involve mentoring junior students and providing direction to peers, but it may also involve participation in the development of policies. Student leaders may be involved in governance, representatives to faculty organizations, or involved in student professional organizations at the state, regional, or national level, such as the American Psychological Association of Graduate Students (APAGS). At the point of entry to practice, psychologists should understand the principles of the policies and procedures for organizations, and be willing and able to take an active part in developing or changing policies, including public policy, that have an impact on their clients, their services, or the profession (NCSPP, 2007). Willingness to advocate on behalf of the profession and those they serve with regard to policy and personal action is a basic leadership competency. Such advocacy may take the form of participating in professional organizational efforts to improve health care, or, for example, the 2000 rally by graduate students in psychology at the APA convention to gain recognition for the amount and worth of services provided by graduate assistants (Chamberlin, 2000).

Multidisciplinary teams in health-care settings include a variety of professions, and psychologists may be one of a few of these trained at the doctoral level. So, other professionals may look to the entry-level psychologist to lead research and evaluation efforts, program evaluation, or sophisticated assessment and psychotherapy efforts, because of their comparatively advanced level of education and training. In this case, other health-care professionals seek guidance and direction from the beginning psychologist in the area of their education and training, and recent psychology graduates may find themselves chair committees or task groups.

Leadership skills include engendering trust (Russakoff, 2003); so, a basic competency in leadership is the capacity to be trustworthy. This is demonstrated by consistency in performance,

reliability, accountability, and responsibility within functions and operations. An unreliable leader who betrays the trust of his/her followers, or worse, exploits them, may be abandoned. The beginning leader promotes the institution to both internal and external audiences and behaves in ways that are consistent with the stated mission and purpose. Leaders are inspirational and help to motivate workers (Steger et al., 1973), so beginning leaders help to motivate peers and team members as well as themselves. Without followers, a leader is simply an individual marching off into the wilderness, so a basic attitude of accountability to followers and the ability to share the vision in order to motivate others are essential as a basic competency in leadership.

22.2.4 Executive Management

The transition from clinician to clinic manager is one that usually takes place at an advanced level of practice, ironically transporting the seasoned clinician into the rather unfamiliar world of management. Again, this is an area or competency not usually included in the doctoral program curriculum, although management of mental health systems seems to become more complex and demanding every year (Drum, 1999). Mental health care might be characterized as a turbulent field, in which uncertainty, complexity, and unexpected change make management tasks more difficult. Executive management competency involves oversight of other workers and resources, such as human resources, facilities management, and systems coordination.

Human resources and personnel management is a major area of executive management. Basic competency in this area is awareness of the functions of various staff, their background and training, necessary credentials, and participation in recruitment and retention efforts. At the basic level, psychologists should have an awareness of the qualities and abilities needed in various staff openings, such as clerical or reception staff, and should be able to participate in screening and selection of staff (Wiger, 2007). Even while they are in doctoral training, students in psychology training clinics need to have an awareness of the support staff functions and the qualities necessary for such positions. Although they will likely not be made responsible for personnel decisions at this level, they may take part in interviews for open staff positions, even with fellow students.

Psychologists should be knowledgeable about the job and performance expectations for various clinical and nonclinical staff positions, so as to be aware when someone is performing well or needs improvement. Psychologists should be respectful of the cooperative contributions of clinical and nonclinical staff (Picano & Blusewicz, 2003). Some students may be confused about this, and behave less respectfully toward administrative staff members than they do with faculty, unaware that such behavior will most likely be communicated to the faculty members and that it may be grounds for disciplinary action. At the level of entry to practice, psychologists are expected to be able to evaluate the performance of support, clerical, and administrative staff members, and be familiar with their roles and expectations for performance.

By the same token, basic competency in this area would include the knowledge of one's own performance expectations, credentialing, and worth. Managing one's own career, seeking advice or counsel from mentors, consideration of the impact of job changes or positions in pursuit of career goals, and presenting well at job interviews could be considered part of this basic competency (Fraser, 2003; Wiger, 2007). Students are often introduced to this process in their

doctoral program as they prepare for interviews for practicum placement and/or internship. Doctoral programs now often conduct training sessions in the nonspecific aspects of internship applications and interviews, including manner of dress and appearance, how to conduct oneself during an interview, how to ask for, and receive, information about the selection process, and what sorts of settings and training sites to include in the search for placement. The training continues as the intern prepares for postdoctoral training or placement, and considers when to sit for the licensing examination and what sorts of positions for which they may choose to apply.

Basic competency in executive management includes an awareness of safety and security measures (Gaver, 2000), and of necessary physical facilities and furnishings. Supplies are needed for office functions, offices must be furnished, and files require file cabinets for storage. These are all basic functions of the executive manager, and even psychologists employed in large organizations or institutions are aware that someone must be monitoring supplies and ensuring that the infrastructure of the organization supports the clinical activities and functions of the agency. The dean of an academic program repeatedly teased the associated clinic directors that part of their jobs involved ordering toilet paper. The teasing might be regarded as demeaning, but the necessity of a continuous supply of toilet paper for the smooth function of the clinic cannot be denied. Although the clinic directors were not directly involved in ordering office supplies, they supervised the staff who monitored and ordered supplies to keep the office running. Someone is also responsible for safety and security measures, and this may include an oversight of security staff, or safety measures, such as evacuations plans, panic buttons, and emergency procedures.

Nonclinical supervisory development is another area of competency in executive management. At a basic level, the psychologist must be capable of providing others with verbal or written direction (APA, 2007a), and should be aware of group processes and lines of reporting (Fraser, 2003). Psychologists in early career stages are often called upon to supervise support staff, such as clinic managers, receptionists, or contract with billing services agencies or answering services. Some basic strategies for conflict resolution are also expected in developing skill in nonclinical supervision (Patti, 1983). At the level of entry to practice, the psychologist should be able to give instructions to staff in understandable language, be aware of the reporting lines involved, so that he/she is not violating organizational hierarchy in giving directions, and should be able to avoid egregious organizational violations in the process. For example, the psychologist should be able to avoid directing her or his supervisor to make coffee, making comments that might be construed as sexual harassment, or promoting disputes between office workers. The psychologist should exercise good judgment as well as clarity in directing others, and so, use power responsibly, taking responsibility along with authority (Steger et al., 1973). Psychologists need to use awareness of personality styles and communication styles to promote cooperation and avoid creating conflict. It is sometimes difficult for the beginning professional to learn that it is not advisable to develop overly friendly relationships with support staff, for instance to go to lunch every day with the receptionist instead of with one's peers, since establishing friendly and cooperative relationships with peers facilitates operations. The early career psychologist, in a hospital, for example, may need to learn to go to lunch in the doctor's lunchroom instead of sitting out in the open cafeteria with nurses and aides, even though it may be uncomfortable at first. Avoiding gossip about one's coworkers and maintaining pleasant, cooperative communication with subordinates and peers is also a skill expected at the level of entry to practice.

Staff and team development is another function of executive management. Early in training, we expect psychology students to develop an attitude that values lifelong learning and motivation to develop professional skills (APA, 2007a; Cohen, Shore, & Mazade, 1991). At the level of entry to practice, psychologists should take responsibility for their learning and professional skills (Steger et al., 1973). They need to be able to set learning goals, seek out opportunities for development, and incorporate feedback. This may require an awareness of organizational requirements for training, such as annual certification in emergency procedures, or licensure requirements for training, such as required continuing education units in certain areas for renewal of the license to practice.

They also need to be good team members, who are knowledgeable about other professions and can work cooperatively in interdisciplinary teams (Nash, 1983). Psychologists should be able to articulate the contribution of their own expertise to the team effort, and be easily managed by others, that is, follow the policies and direction of management to optimize the outcomes of the team effort. Good team members are aware of their own strengths and challenges, as well as the strengths and challenges of the other members. They are willing to contribute their strengths and pass off to other team members the tasks that are best dealt when addressed by others. A poor team member operates individually in the presence of others, neither recognizing nor utilizing the strength of the team. Knowledge of team-building and operations is within the purview of the executive manager. In this process, the beginning manager contributes to the development of self as well as to other team members.

Executive management includes oversight of organizational systems. At the most basic level, one must understand the relationship between the roles and functions of supervisors, managers, and executives (Hatcher & Lassiter, 2006). Students in training often learn about these differences by observing the functions and the people performing them, rather than in the classroom. However, such learning can be very effective, as they operate within training clinics and other settings. Students become familiar with the interaction between budget and fiscal forces and clinical service delivery, between staff support and supervision, and between consumers and providers. At the level of entry to practice, psychologists should be aware of typical organizational charts and how they translate into operations (Veenhuis, 2003). Beginning psychologists, therefore, should recognize the difference between a reporting line and a communication line, and should be able to articulate their purposes. They should know the difference between operations that are organized around function, e.g., medical transcription, and those that are organized around purpose, e.g., the oncology ward. They should be able to identify basic resources, including personnel and facilities, and use them wisely and effectively to serve the organizational purpose.

Basic competency in executive management also requires awareness of basic system structures and how they interact (McAlearney et al., 2005). This allows students and early career psychologists to effectively work within various organizational structures, understand hierarchical relationships and become a multidisciplinary team member (NCSPP, 2007). Early in their training, students learn that it is not sufficient to obtain a client's permission to request records from another service provider and place the signed consent form in the chart. They learn that someone has to send that request to the other service provider and document the delivery and receipt of any information. In some organizations, the student may be the one to do this, while in other agencies, such tasks may be performed by support staff, who must be directed by the student. At the level of entry to practice, psychologists should be aware of the various functions of the parts of the organization. They should know, for instance, to whom

they should report a problem with medical charts, or to whom they should direct a question about how to arrange a patient's discharge from the hospital. They should be aware of the strengths and any weaknesses or difficulties in the organizational functions, and how to address them, overcome them, or compensate for them. In any case, basic competency requires knowledge of the organizational structure to facilitate ancillary and support functions.

22.3 Expert Competencies

22.3.1 Planning and Organizing

Expertise in planning involves the ability to plan beyond what is required for one's own workload. It involves planning for others: organizations, agencies, and systems. While beginners understand the function of meetings and participate constructively, advanced competency includes the ability to plan and run meetings well, develop agendas, gather information and participants, and keep participants focused on the task (Hatcher & Lassiter, 2006). There is, perhaps, nothing quite so frustrating to participants than a poorly planned meeting. The expert planner uses meeting time effectively. In order to do this, the purpose for the meeting must be identified, and the agenda developed, allocating meeting time and resources to accomplish the purpose. Resources, such as materials, literature, and information, must be gathered and distributed to participants, either in advance if preparation is required or at the meeting. Then the expert must manage the process of the meeting, allowing sufficient time for discussion and bringing participants back to the purpose when they inevitably stray without stifling good ideas and comments.

Experts in planning understand the process of strategic planning, including forecasting future trends, planning to acquire resources, outlining the necessary objectives, and implementing work toward the organization's mission, goals, and objectives (Veenhuis, 2003). Strategic plans for organizations must link structure to function (Russakoff, 2003), so that organizations are able to perform the expected functions. For instance, if an agency decided to provide integrated health care including psychological services in primary care, consideration might be given to the structure of the service area. Traditional, colocated structures would have a psychology clinic separate from the primary care or medicine clinic, in two, separate or "silo" spaces. A structure that would facilitate integrated care would be to share the service space, so that psychology interview rooms are directly adjacent to or in the same space with primary care or medicine examination rooms to increase the interaction between physicians and psychologists. Similarly, an organizational infrastructure that facilitates integrated care would avoid "silo" reporting infrastructures in favor of integrated ones, such as creation of multidisciplinary teams focused on patient populations, rather than creation of discipline-specific teams.

Strategic planning includes developing strategies to ensure that programs consistently provide appropriate, timely services to consumers in an ever-changing market (Patterson, 2000). Experts in strategic planning develop farther planning horizons, forecasting and planning strategies years into the future. They predict and analyze internal and external factors in order to make decisions. Similarly, they predict and proactively attempt to solve problems that might interfere with the accomplishment of goals and objectives (McAlearney, Fisher, Heiser, Robbins & Kelleher 2005).

While beginners organize their own work, experts organize work to be done by others and systems. The expert organizer spells out the tasks and roles of staff in order to promote a coordinated team effort of work toward goals and objectives (Steger et al., 1973). This requires analysis of the various parts of the effort, the skills necessary to perform them, the quality of performance expected, and the timing of the different facets of the effort in order to promote smooth service delivery. In planning a conference, for instance, speakers must be identified and invited, brochures prepared, venues located and booked, registrations received and processed, along with a variety of other tasks. These tasks must be completed on a time line, so that registrations cannot be received and processed until brochures with registration forms have been prepared and distributed, for example. Complex projects require complex planning, and this is the realm of the expert planner.

Expert organizers both initiate structure and maintain structure, keeping teams and systems organized and coordinated (Veenhuis, 2003). When problems occur, the expert analyzes the sources of the problems and makes corrections to the organization in order to improve performance, expand or contract services, or change the nature of the service provision. Since problems in the system can often create the appearance that a worker is ineffective (Russakoff, 2003), the expert investigates the nature of the organization to identify system structures that impede the function of employees. Rapid staff turnover with continuing performance problems may often indicate a structural problem. In such a case, staff replacements will also find themselves to be ineffective, not because they lack skill or training, but because something in the system continues to block performance, and the system needs to be adjusted or changed in order to allow staff members to perform well. Finally, when the system is operating well, expert organizers ensure that it continues to do so, acting as organizational stewards, monitoring and checking expected outcomes and maintaining operations (Picano & Blusewicz, 2003).

Beyond the basic competencies of professional behavior, an expert competency in planning and organization involves ensuring professional behavior for organizations and other workers. This may include encouraging prompt and timely task completion, record-keeping, and reasonable assignment of tasks and deadlines for completion. The expert has an awareness of the purposes of policies and procedures and ensures that others understand them as well, so as to enhance compliance with standards and regulations. In short, the expert extends personal professional behavior into the work environment, setting not only the example and providing a model for others to follow, but also setting standards for the professional behavior of subordinates and organizations.

Finally, while basic competency calls for adapting to change, expert competency requires flexibility in planning so as to respond to changing priorities and predicted trends. Not only are experts aware of the need to change plans resulting from external and internship forces (Veenhuis, 2003), they have the ability to monitor and review ongoing effectiveness of planned activities and respond according to this assessment (NES, 2006), making adjustments in future plans to accommodate new directions provided by ongoing assessment. The practice of professional psychology underwent a profound change years ago with the advent of managed care. Some providers thrived with the changes, while some floundered and experienced severe decreases in services and income. Some practitioners managed to change direction, practices, or services to respond to the new market pressures, including strategies from directing managed care operations to establishing private-pay-only practices, others had great difficulty changing their policies and practices. The most successful expert planners anticipate difficulties

to overcome them, develop contingency plans in the case of obstacles, and quickly react to unexpected developments by adjusting their plans and strategies to accomplish goals.

22.3.2 Administration

Expert competencies in administrative skills extend beyond the level of one's own functioning within systems to other professionals and staff in organizations and agencies. This level of expertise is usually acquired well after entry to practice, and sometimes by "on the job training," as psychologists move into administrative management positions. Expert competencies in business, marketing and finance, organizational and community systems, ethics, legal issues and policies, quality improvement, and information management involve extending the range of influence from self to others and from compliance to creation and development.

Administration experts have developed more sophisticated knowledge of business and financial systems. They are able to use their knowledge of consumers and vendors, the marketplace, and the changes in the market to develop successful business plans. They monitor pricing of services, costs of operating, and utilization of review to develop budgets and report revenue and expenditures to financial managers (Picano & Blusewicz, 2003; Russakoff, 2003; Silver, 2003; Wiger, 2007). They have the capacity to manage the finances of practice (Cohen et al., 1991; McAlearney et al., 2005), which requires a general knowledge of bookkeeping and accounting principles (Newman, 2000). At expert levels, this knowledge may include financial analysis, balance sheets, income statements, and cash-flow statements. Knowledge of the costs of starting a business, how to locate funding sources, and how to reflect the values of the profession and the professional in the business plan are skills of the expert administrator (Silver, 2003). The ability to develop and manage contracts depends on a financial analysis of the services to be contracted (Fraser, 2003), and this may require knowledge of the methods of capitation, fee-for-service funding, billing, and pricing (Crowell, 1983; Gaver, 2000), along with the ability to negotiate and set fees and payments for organization and agency contracts. The impact of staff and faculty recruitment and retention efforts must be understood and planned (Hayes et al., 1999). Financial management skills also include knowledge about the purpose and conduct of audits (Crowell). These business and financial skills have been described as entrepreneurial savvy (Staton, 2000), but supply and demand principles that govern other markets do not fully explain the health-care market, which is supported and policed by government agencies and influenced by the vast insurance industry. Psychologists, who are trained to care for people, must have knowledge and experience in public policy administration and governmental and insurance regulations in order to function as effective administrators. While some psychologists may acquire this knowledge and experience themselves, and some even obtain degrees in business administration, other psychologists must understand the principles and either follow information provided by their professional association or understand the need to employ financial officers to manage the complexities.

Above and beyond maintaining malpractice and/or liability insurance for an individual provider or practice, liability insurance for organizations must be priced and analyzed as well as maintained, and cover a variety of professionals in multidisciplinary systems (Gaver, 2000). Risk management and insurance for larger organizations also include insurance of facilities and against accidents and injuries, unemployment, and workman's compensation. At this level of administration expertise, one must consider the costs and liabilities of organizational operation.

Expert marketing skills extend beyond simply making information available to include market research, forecasting, and understanding the concepts of demand, and positioning services in the marketplace (Whyte & Martin, 2000). Knowledge of the methods of market research allows the administrator to assess the needs, wants, and demands of potential consumers and the purchasers of services. This allows an administrator to position the agency or organization in a favorable stance in comparison to competitors. It also facilitates prediction and understanding of the forecasted demand for services, so that the agency can respond to expected changes in need. Forecasting requires familiarity with trends in business models of psychological service delivery as well as changes in clinical procedures (Freeman, 1999).

Expertise in marketing also includes more sophisticated methods of making information about services and products available, as well as more focused delivery methods to potential consumers. Efficiency of marketing, in order to get the most return on one's investment, becomes more important in marketing management (Fraser, 2003; Gaver, 2000; Wiger, 2007). Media communications, press releases, and public service announcements are some of the more sophisticated methods available (Dyer, 1999). The same ethical principles apply to sophisticated marketing and advertising strategies as to basic advertisement (APA, 2002).

Basic administration competency in organizational and community systems requires understanding of functions, but expert competency in this area involves development and oversight of systems. Expert administrators are able to establish systems for management and monitoring information (NES, 2006), build and maintain clinics or institutions to serve a vision or goal (Wiger, 2007), and maintain operations and monitor results (Veenhuis, 2003). They direct and coordinate interdisciplinary programs, community services, developing internal operating procedures and managing external communications and relationships (Crowell, 1983; Dyer, 1999; Patti, 1983). Administrators are often faced with the task of creating systems to accomplish goals and monitor results, and must take into account the mechanisms of service delivery and all of the ancillary activities. There are many activities involved in directing programs and systems, and are too many to describe here. Staff members are often unaware of what administrators of large systems do and how they spend their time, until the administrator is not available and some essential activity needs attention.

Creating and managing an organizational hierarchy requires knowledge of governance issues, and may include developing a board of directors, advisory board, officers, members, and others (Fowler, 1999). Political, social, diversity, and other issues must be considered in the development and direction of service provision and professional organizations. The expert administrator needs to balance the talents and skills of the people in the organizational hierarchy with the needs of the organization, and create governance structures to serve not only the organization and its consumers, but also the communities within which it operates. Dealing with the political and social context of the organization is a necessary skill for expert administrators (Dyer, 1999).

As discussed earlier, beginning practitioners must be aware of the policies and regulations that impact upon their practice, but the expert administrator develops the policies and procedures for agencies and organizations (Wiger, 2007). The policies and procedures created will serve as guidelines for a variety of purposes, some directly related to operations, and some related to difficulties which may arise in the process of operations. For instance, an administrator will be called upon to address complaints from consumers and others, and will need to develop strategies to protect clients, clinicians, and the institution from unethical practices. Administrators may find themselves in the role of investigator and judge in evaluating

complaints and appeals, and must be familiar with the principles of due process and ensure considerate and fair treatment of all parties concerned.

Further, expert administrators should be able to design and develop programs that integrate the pertinent legal and ethical issues, by writing regulations to ensure compliance in program implementation. Policy development, analysis, and guiding procedures through any political process to adoption or approval are within the purview of an administrator (Cohen, Shore & Mazade, 1991). Then administrators must interpret policy and mandates, train staff to operate within policies, and develop mechanisms to allow them to do so (Patti, 1983; Staton, 2000). For example, when the Health Insurance Portability and Accountability Act (HIPAA) was enacted in 1996, administrators reviewed the implications for their organizations and operations, developed policies and procedures to ensure HIPAA compliance, trained staff and professionals in both the meaning of the act and the new policies and procedures, implemented these mechanisms, and monitored compliance. For some clinics, this meant changing procedures for checking clients in at a front desk, the way charts were stored, and even the methods of obtaining informed consent for services.

Quality improvement principles and methods become much more sophisticated while moving from basic to expert competency in administration. While beginning, practitioners must be aware of the need to provide quality services and monitor and document progress and services; expert administrators are responsible for evaluating the quality of systems of service delivery. Although most students of psychology learn the principles of program evaluation in graduate school (APA, 2007a), conducting program evaluation for external funding sources and accrediting bodies is an expert competency (Cox, 1983). This requires experience and knowledge in mental health care and clinical settings (Wiger, 2007), but also includes the ability to identify markers or indicators of quality and problems, with plans for evaluating and addressing problems that might be identified (Cohen et al., 1991). The ability to develop record-keeping methods that aid the organization's function, and use these records to monitor the results of programs and assess outcomes applies to large and small systems of services (Krousel-Wood, 2000; Veenhuis, 2003). For local agencies, regions, states, and even nations, the principles include alignment of policy for quality improvement, development of standards and accreditation procedures, methods to monitor results, review policies, integrate reforms, and improve programs (WHO, 2003). Management of program evaluation requires continued vigilance to not only identify opportunities for improvement in outcomes, but to create methods and processes to accomplish improvement (Crowell, 1983), and include consideration of perceived cost to the organization in the improvement of quality (Veenhuis). Such processes may include evaluation of forms, updates, chart-keeping methods, systems for paperwork completion and reduction, and electronic record-keeping systems. Client satisfaction surveys may include information about support systems that are not related to clinical outcomes, e.g., waiting lists, front desk reception, or billing issues.

In the area of information management, expert competency in administration involves more than the professional presentations and reports, clear oral and written communication, and information literacy expected at entry to practice. The expert administrator is able to create systems for accurate dissemination of needed information (Veenhuis, 2003). Management decisions are meaningless unless they are accurately communicated up and down the conduit of supervision in a timely manner. Agencies and organizations often suffer from communication problems when there is no mechanism in place to convey information to those who may need it. The mechanism may be a series of meetings, distribution of manuals, reports, memoranda,

or newsletters, but regardless of the method, expert administrators must develop and implement ways of communicating information necessary to system and program operation to the people who are involved in the system. Similarly, they must be able to develop and implement methods to gather information needed for decision making and problem resolution.

22.3.3 Leadership

In some ways, leadership is an expert competency, since most psychologists do not fully develop leadership skills until they are advanced in their careers. Even though the groundwork of leadership skills may have been gained before entry to practice, competency in leadership expands greatly at the advanced level. Leadership involves creating something new, and inspiring others to assist in the creation, rather than maintaining established operations.

While basic competency involves the ability to articulate the primary mission and limits of settings (NCSPP, 2007), expert competency in leadership involves creating the mission of organizations and institutions (Drum, 1999; McAlearney et al., 2005). At this level, leaders develop a vision of what they want to achieve, convert that vision into attainable goals, and motivate others to work toward those goals (Reid & Reid, 2003). In order to do that, a leader needs to be both creative and pragmatic to visualize organizational purpose, philosophy of treatment, core values of operations (Drum), and then devise practical methods to accomplish the purpose, all the while guided by the values inherent in the purpose. Leaders become symbols of their mission.

Translating the mission into operation requires developing goals and objectives. Leaders must understand the context of work, culture, gender, ability, and other diversity factors in order to articulate the goals (Russakoff, 2003). Familiarity with affirmative action principles, organizational design, and organizational development is desirable (Fraser, 2003). In addition, leaders must be prepared to change goals and methods and be responsive to internal and external forces. Logical change, based upon input from other participants, is preferable to random or unreliable change, because allowing others to participate in the planning, decision-making, and goal-setting processes inspires confidence and loyalty (Steger et al., 1973). Leadership may even require recognition that change is likely and should be welcomed (Reid & Reid).

At the expert level of competency in leadership, one is capable of providing direction to other professionals, staff, and organizations (APA, 2007a). Expert leaders create policy (Hatcher & Lassiter, 2006) and participate in internal and external system change (APA) through advocacy efforts. Leaders bring people together to work toward the goals of the organization and guide their actions (Reid & Reid, 2003), foster collaboration, build teams (McAlearney et al., 2005), and coordinate the efforts of teams focused on the different aspects of the operation. For instance, the expert leader may act as a bridge between the clinical and business sides of a practice organization (Wiger, 2007). Or the leader may act as a conductor, coordinating the efforts of many instruments, setting the tone and pace, in the overall direction of effort. An example of this type of leadership activity is the office of the APA President. The elected President of APA develops initiatives within the general scope of APA activities, selects several members to work on these initiatives, and sets the tone and pace of these initiatives within the context of many ongoing APA activities in order to lead the entire organization and profession or discipline into future endeavors.

There are many different styles of leadership, and psychologists have studied these styles for quite some time. Lewin, Lippit, and White (1939) identified three major leadership styles: authoritarian (autocratic), participative (democratic), and delegative (laissez-faire) (1939). According to Lewin et al., autocratic leaders establish clear expectation for what needs to be done, the deadline for the assignment, and the structure of how it should be completed. There is a clear boundary between the leader and the employees. Usually an autocratic leader makes all of the decisions with little or no input from others. The democratic leader often includes group members in the decision process. The leader offers guidance and support to employees and encourages each member to participate. Though the leaders are more inclusive, they often, make the final decision. This leadership style has been found to be the most effective. Delegative leaders often allow the employees to make decisions; however, the leader is responsible for all decisions made. The leader offers little to no guidance while decisions are being made. At times, this type of leadership style leads to ineffective work quality due to poorly defined roles and expectations.

Regardless of the style and the various personal characteristics of leaders, all of them need to motivate followers. They inspire workers to move toward the goals that the leader has set, bring them together for that work, engender trust in leadership, and empower workers to act (Reid & Reid, 2003). Expert leaders give credit for success and take visible responsibility for failure in order to be credible to their followers. There are indicators that clinical and other staff members prefer their leaders to keep them informed of important issues, represent them well, promote their services, provide mediation in the event of conflict in order to assist in resolution, shield them from unnecessary administrative interference, and be a resource for clinicians (Crowell, 1983). A rather democratic leadership style, one that allows for and values the participation of clinicians, is generally well suited for organizations providing psychological services (Wiger, 2007). Consistent, predictable leadership that allows colleagues to share ideas about the organizational process may be generally effective (Steger et al., 1973). Personal mastery, the ability to take another's perspective, flexibility (Picano & Blusewicz, 2003), relational skills, assertiveness, and the ability to deal with others individually and in groups promote a healthy and safe work and office environment (Wiger).

Not all psychologists want to be leaders, and not all leaders want to lead. Sometimes, psychologists may find themselves in the position of leadership without having actively sought the responsibilities, or feel that they lead out of necessity, because no one else was willing to step up or because those they serve needed leadership. Some psychologists step into leadership positions by promoting transformative ideas, while others are encouraged by colleagues who recognize their knowledge and skill. Whether psychologists assume leadership positions within agencies, professional organizations, or in other public forums, expert competency in leadership involves development of vision or mission, motivation of others, and response to the needs of followers.

22.3.4 Executive Management

Expert competency in executive management involves nonclinical supervision and oversight of others, dealing with human resource and personnel issues. This area of competency becomes far larger, more sophisticated, and advanced at the expert level than at the basic level. First, the executive manager analyzes and creates a position description and expectations, including

necessary qualifications and credentials for essential functions (Armenti, 1999; Cohen et al., 1991; Hirsch & Reed, 2003; Martin, 2000; Veenhuis, 2003; Wiger, 2007). This applies to clinical, nonclinical, or support positions, psychiatrist, social worker, billing clerk, or receptionist. Next, applicants for the positions must be recruited, screened, and interviewed. Selections to fill open positions are then made. The process may sound simple, but it is actually quite complex. Recruiting suitable applicants takes more than a simple notice; it requires placing position notices in places such that suitable applicants, those with particular talents, interests, and credentials, are likely to see them. The executive manager then needs to evaluate the applicants' strengths and challenges in relation to the position opening, and make ranking decisions regarding the applications, both confirmatory and exclusionary. For instance, the manager may seek applicants for a clinical service position who have clinical experience with children and adolescents, group therapy, and psychological testing, but exclude those with an inactive license to practice or with felony convictions. Managers also may need to determine and negotiate salaries, benefits, and other conditions (Wiger).

Once a new staff member is recruited, selected, and hired, he/she must be oriented and trained (Armenti, 1999; Cohen et al., 1991; Hirsch & Reed, 2003; Martin, 2000). Even the most skilled clinician or experienced clerical staff member will need to receive training and orientation to new settings and procedures. The executive manager provides for, or directs, this training and orientation. Similarly, the executive manager devises and/or communicates employee evaluation methods, including the criteria for retention, promotion, disciplinary action, and termination (Fraser, 2003; Hirsch & Reed; Hoge et al., 2005; Martin; Wiger, 2007). This may involve merit-based awards, recognition programs, such as "employee of the month" programs (Hoge et al.), or promotion in rank and tenure in academic settings. Executive management skills include devising reward programs based upon demonstration of competencies and skills that the organization values and identifies as important for success. Additionally, the executive manager is responsible for methods to convey negative or critical feedback and those of progressive disciplinary action up to and including termination. This unpleasant but necessary task must be accomplished with consideration for client care, health of the organization, legal and regulatory standards, and rights of the employee, so it demands sensitivity, careful, clear, and forthright communication.

For continuing employees, executive managers are often responsible for devising or delivering in-service training or education (Hirsch & Reed, 2003; Wiger, 2007) and staff development (Fraser, 2003; Steger et al., 1973). Professional staff need to obtain continuing education, and both clinical and nonclinical staff need to be advised of changes in standards of care, legal and ethical changes, and policy and procedural changes (Crowell, 1983). Proper training promotes growth and development by providing opportunities to learn new approaches to treatment. All staff members need to be informed about broad influences affecting their organization and services, how these influences might affect their work environment and responsibilities, and their productivity and accountability. Training experiences also promote good communication and team function.

The expert manager may also need to pay particular attention to workforce development and career management for women and minorities in order to recruit and retain diverse professional and staff members to serve client populations. Executive managers are also called upon to deal with cutback and retrenchment, reduction-in-force, employee assistance programs, unionization, and other human resource issues, such as vacation scheduling and family leave, so they need to be cognizant of employment law. In mental health service delivery,

executive managers are often involved in advocacy efforts to secure operating funds and assess and justify the need for their programs in a culture that often views mental health treatment as optional or exceptional (Patti, 1983). This may require expertise in utilization management, and recording and analyzing records of service utilization (Armenti, 1999). For instance, Bridges, Goldberg, Evens, & Sharpe (1991) noted that patients were far more likely to accept referrals to mental health service providers when the services were available in the same location as their primary health-care provider. This study has been frequently cited as psychologists develop models for provision of psychological services in primary care settings.

Another unpleasant but necessary task that executive managers must perform is resolution of disputes between employees (Patti, 1983; Picano & Blusewicz, 2003). In any organization, conflicts arise between individuals or between different sections of the organization, and it falls upon the expertise of the executive manager to assist in addressing and resolving these conflicts. In so doing, the manager must focus on the health, values, and function of the organization, and again, respond with sensitivity, clear communication, and knowledge of interpersonal interactions.

The expert executive manager is responsible for the management of physical facilities (Gaver, 2000). Acquisition and planning of office space, layout, furnishings, and supplies are more complex than they may appear. Mental health service delivery systems often require special attention to client flow, soundproofing, and safety and security issues than other service systems or businesses. It is often noted that, unlike some other professions, psychologists do not like to talk to clients or students across a desk, because it poses a psychological barrier to communication, so they even prefer a different layout of furniture than some other professionals. Other considerations include methods to call for emergency assistance, such as using "panic buttons," ensuring that people in the waiting room cannot hear conversations in interview rooms, and ensuring secure storage of records. Expert competency in executive management involves obtaining, shepherding, and allocating resources, including materials and time (Patti, 1983; Steger et al., 1973; Veenhuis, 2003).

In the area of staff and team development, expert competency in executive management includes management of interdisciplinary teams (Nash, 1983). Managers must identify the strengths and weaknesses that each individual team member brings to the effort as well as the skill and knowledge base of the discipline represented by each team member. The manager is then responsible for coordinating the team effort, to ensure that the team is working together effectively toward the common goal. This requires ensuring that each team member has or can acquire the skills they need to function effectively and that they are following organizational policies. But teamwork does not just happen; the executive manager promotes effective team communication and fosters group dynamics to allow for coordinated efforts.

Executive management skills require a rather delicate balance between providing direction and allowing others to do their work with associated responsibility and authority (Steger et al., 1973). While the manager provides feedback, suggestions for improvement, sets goals, and assigns responsibilities, he/she also needs to allow others to accomplish tasks without "micromanagement." While a new and inexperienced worker needs and appreciates very specific and detailed instruction and direction, the experienced or middle-management staff member may view such attention as demeaning and irritating. The expert manager recognizes the level of oversight required for the developmental level of the subordinate, and provides that level of attention.

The executive manager is, in part, responsible for the morale of the staff, creating the conditions to promote job satisfaction for employees and contractors (Reid, 2003). Loyalty and trust are earned (Russakoff, 2003), and the expert manager earns them from employees by balancing direction with consistent dialogue, support, encouragement, development, and delegation (Hoge et al., 2005). While many factors, both internal and external, may impact morale, if staff members are demoralized, the manager is called upon to address and improve the overall working atmosphere of the organization. The techniques used by the expert to address morale range widely, but usually include expressions of appreciation and recognition for effort and good performance.

In order to accomplish these tasks, the executive manager must have knowledge of group dynamics and organizational structures. Expertise in organizational assessment and systems analysis is competency at the expert level of executive management (Fraser, 2003; McAlearney et al., 2005). The ability to analyze systems allows the manager to differentiate between a problem employee and a problem in the system (Russakoff, 2003), so as to be aware when an organizational dysfunction causes a staff member to appear to be ineffective. Without this knowledge and analytic ability, managers may find themselves facing continuing turnovers in personnel without resolving the problem, because the dysfunction lies within the system rather than in the lack of skill or performance of the employee. This expertise then allows the manager to make corrections in systemic operations as necessary to improve outcomes and productivity (Veenhuis, 2003).

Systems analysis applies to the system outside of the organization, within which the organization functions, as well as to the internal systems. Expertise in executive management includes collaboration with external agencies, interagency relations, political advocacy, and positioning within the community (Cohen et al., 1991) and the profession (Wiger, 2007). While basic competency in this area focuses on working effectively within the internal organizational structure and hierarchy, expert competency involves ensuring that the organization works effectively with the community and the external structure of agencies as well.

22.4 Summary

In summary, four areas of competency in management and administration are identified, and the basic and expert competencies in each area are described under several themes. Planning and organizing includes basic and expert skills in planning, organizing, professionalism, and flexibility. Administration includes basic and expert skills in business, marketing and finance, organizational and community systems, policies, ethical and legal issues, quality improvement, and information management. Leadership includes basic and expert skills in vision, mission and purpose, guidance, and leader characteristics. Executive management includes basic and expert skills in human resources and personnel, oversight and development, staff/team development and management, and organizational structure. In general terms, the basic competencies in these areas apply to one's own activities, while expert competencies apply to activities of others, whether in small or large organizations. The amount and extent of knowledge and skill also increases, extending outward in time, horizon, and numbers of people and operations managed.

Competencies in management and administration are not as familiar to psychologists as those that are more closely associated with clinical or research skills. Most training programs

do not offer specific didactic or experiential training in management or administration, since it is often seen as expertise that is acquired with experience later in the career stages. However, changes in the health-care marketplace in recent years have placed increasing emphasis on the need for skills in management and administration for psychologists. It is not anticipated that all psychologists will develop all of the expert competencies we have described. Most will develop some of them, depending on their career paths, and a few will develop consummate expertise in all of these areas. A few will lead us to new competencies in management and administration.

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Volume II
Intervention and Treatment for Adults

Adults

1 Major Depression

Patricia A. Arean · Liat Ayalon

Abstract: Major depression is the most common condition treated by psychologists. In this book chapter, we first outline the typical symptoms that characterize major depression as well as common risk factors for the development of the disorder. Next, we discuss common diagnostic tools that assist clinicians in the initial recognition of the disorder as well as in further monitoring of the disorder across time. Potential pitfalls and complicating factors related to the diagnosis and monitoring of major depression are also addressed. We then discuss maintaining factors and mechanisms of change associated with major depression, as any psychological intervention has to take these into account when tailoring an appropriate intervention. Finally, we conclude by describing several evidence based treatments available to treat depression and the various outlets available for psychologists who are interested in learning how to apply these treatments in their clinical practice. We conclude by outlining the main competencies required of clinicians interested in working with individuals with major depression. These include: the ability to adequately detect and monitor depression, the ability to make an informed case formulation, the ability to tailor treatment strategies based on existing knowledge concerning maintaining factors and mechanisms of change, and the ability to apply evidence based treatments in the context of evidence based practice.

1.1   Overview

Major depression is one of the most common mental disorders in adult populations and is the most common illness that psychologists treat. Major depression is considered to be the fourth leading cause of disability in the USA (WHO, 2000). It can affect people at any stage of life, and once a person experiences one episode of major depression, that person is likely to experience at least two to three relapses in his or her lifetime (Parashar et al., 2006). Major depression is also the leading cause of suicide in adults, particularly adults aged 65 and older (Conwell, 2001), and it is associated with increased morbidity and mortality when related to medical illness (WHO).

It is particularly important that all clinical psychologists be familiar with major depression, specifically how to diagnose the disorder and differentiate it from other, similar disorders, how to determine a treatment plan, and how to use evidence-based interventions in treating it. Fortunately, major depression is one of the most widely studied mental disorders, and as such, there are numerous peer-reviewed studies, books, and manuals on the topic. Further, it has been studied widely across adult age groups and in a number of cultural groups. Our aim in this chapter is to synthesize the extant information on major depression and detail the core and expert competencies that clinical psychologists must have when working with this disorder.

1.2   Recognition of Symptoms and Their Assessment

Major depressive disorder (MDD) is characterized by at least one *major depressive episode*, with no history of mania (e.g., period of intense energy, euphoria, distorted thinking, and behavioral excesses). To qualify for a major depressive episode, either depressed mood or lack of interest or pleasure in usual activities (anhedonia) must be present most of the day, nearly every day, and the episode must last at least 2 weeks. In addition, at least five out of nine possible symptoms must be present during the same period. The symptoms must be severe enough to interfere with the individual's social or occupational functioning. MDD is further qualified by its severity, chronicity, and remission status. Severity is generally determined by the degree of disability experienced by the afflicted person. If the person can continue to pursue his or her obligations (work, family, and social activities), the depression is ranked as *mild*. If the person has trouble getting out of bed and can no longer engage in any obligated activities, the depression will be ranked as *moderate*. If a person is thinking of death or dying or is so vegetative that she or he has not left his or her bed, eaten, or engaged in any self-management activities or is exhibiting psychotic behavior, then the depression will be ranked as *severe*. Although rare, a depressed person can exhibit symptoms of *Catatonia*, which is characterized by immobility, excessive motor activity, extreme negativism or mutism, and bizarre posturing. A person will be diagnosed as having *recurrent type* MDD, if there has been more than one episode of MDD. *Chronic* MDD is characterized by symptoms of MDD for as long as 2 years. As research has found MDD to be a recurrent disorder (single episodes are rare), if a person has had an episode of MDD and is no longer experiencing any depressive symptoms, that person is considered to be *in remission*.

MDD can be further delineated by type. *The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV) describes the concept of *endogenous depression* and is subsumed under the category of *melancholic depression*. This category is characterized by lack of reactivity to pleasurable stimuli, experiencing more severe depression in the morning, and excessive guilt. Some researchers have suggested that this subtype is more typically associated with biological etiology and that it may be more responsive to psychopharmacological intervention (Simons & Thase, 1992). *Atypical features* of depression include temporary brightening of mood in response to actual or potential positive events, weight gain, hypersomnia, heavy feelings in arms or legs, and interpersonal sensitivity to rejection. These symptoms tend to be interpreted as suggesting a depressive disorder that is more likely to respond to psychosocial interventions rather than medications and may be more stress-related (Angst, Gamma, Sellaro, Zhang, & Merikangas, 2002).

1.2.1   Risk Factors

Most scientists now believe that MDD is multifaceted, with causes resulting from interactions of psychological, social, and biological factors (O'Keane, 2000). We note here that no factor is thought to be exclusively causal of depression; rather, most scientists believe that strength in one area can compensate weakness in another. As an example, someone with a strong genetic loading for developing MDD but over the years has developed effective coping strategies to modulate mood may never develop an episode of MDD. When working with MDD patients, therapists should keep this compensatory model in mind.

1.2.2 Psychological Resilience

In the 1980s and 1990s, there was a considerable amount of interest in the role that coping style or psychological resilience has on the risks for developing MDD. Such interest waned in the mid- to late 1990s, but because of recent interest from institutions such as the National Institute of Mental Health in individualized treatments for mental illness (Zarhouni, 2007), study of factors that prevent MDD from developing in the face of genetic loading for the illness have again become an area of important inquiry. Psychological factors related to prevention or risk of MDD include one's perception of the world or cognitive set and an active versus passive coping style (Southwick, Vythilingam, & Charney, 2005). Research has found that cognitive set and coping style tend to be a function of one's experiences with difficult problems. Behaviors develop as a function of either observing others in one's environment coping with stress or through experience with behaviors that have either successfully or unsuccessfully resulted in problem resolution and positive mood. These experiences also help to shape one's perspective of the world and one's ability to function in it. If attempts at solving problems have been largely successful in producing positive mood or in reducing negative mood, then individuals will engage in those successful behaviors in the future and see themselves as being able to successfully manage problems (Haeffel & Grigorenko, 2007; Roy, Sarchiapone, & Carli, 2007; Yi, Vitaliano, Smith, Yi, & Weinger, 2008). Similarly, coping skills have been found to be related to depression. Most researches have found that people who use active forms of coping, such as problems solving, are less likely to become depressed than people who use passive forms of coping, such as avoidance. In fact, one study found that prevalence of major depression was 59.4% in people with avoidant coping styles (Garcia, Valdes, Jodar, Riesco, & de Flores, 1994; Welch & Austin, 2001). Studies show that when faced with a problem to solve, depressed people are more likely to produce less effective solutions than nondepressed people, such as using distraction to cope with a stressor, rather than trying to solve it (Haeffel and Grigorenko).

1.2.3 Life Events

The literature is replete with data indicating that stressful life events contribute to the development of MDD (Hammen, 2005). Although not everyone who is faced with difficult problems becomes depressed, it is evident that prolonged exposure to psychosocial stress can precipitate a depressive episode (Hyde, Mesulis, & Abramson, 2008). Several studies have found that most depressive episodes are preceded by a severe life event or difficulty in the 6 months prior to the onset of the episode (Beck, 2008). In addition, patients with more long-term or chronic depression were more likely to report past abuse, though the causal relationship is unclear (Keita, 2007).

1.2.4 Social Support

Other studies find that the relationship of life events with depression is mediated by social support (Huhman, 2006). Severe life events are significantly more likely to provoke a major depressive episode in individuals without social support (Merry, 2007; Patel, 2007). Support systems give an individual external support when internal coping skills are put to the test. Therefore,

while negative life events do influence the occurrence of depressive disorders, the social and psychological resources available to the person facing the stressful life event generally mediate the impact on mood (Robinson & Shahakian, 2008).

1.2.5 Biological and Physical

Much research effort has gone into determining biological determinants of depression. The literature not only shows evidence of the effects from both neurotransmitters and hormones, but also physiological changes arising from stress that can increase susceptibility to depression (Robinson & Shahkian, 2008).

Biological explanations for depression indicate that MDD is caused in part by a disregulation in three major neurotransmitters in the brain: serotonin, norepinephrine, and dopamine. Antidepressants to regulate production and distribution of these neurotransmitters are effective in their ability to increase the availability of receptor sites rather than increasing the production of the neurotransmitters (Celada, Puig, Amargós-Bosch, Adell, & Artigas, 2004). Recent research into neuroendocrinology has added to our understanding of the biological causes of depression. Evidence points to an overabundance of cortisol in the systems of depressed patients as well as abnormalities in the thyroid functions (Bondy, 2005; Krystal, D'Souza, Sanacora, Goddard, & Charney, 2001). Finally, physiological changes in the brain structure of depressed individuals lend to further support for structural changes in the brain with MDD. Some researchers suggest that dysfunction in the mesial temporal lobe may be related to recurrent MDD (Malhi, Parker, & Greenwood, 2005). These physical changes that can occur during stressor illness and are associated so closely with depression give a more comprehensive picture and explanation of the causes of depression.

1.2.6 Genetics

Recent advances in science have led investigators to better understand the role that genetics plays in the development of MDD. Past studies of identical and fraternal twins found that identical twins have greater concordance rates for depressive disorders ($r = 0.46$) than do fraternal twins ($r = 0.20$) (Flint, Shifman, Munafo, & Mott, 2008). Furthermore, family studies show that even though having a relative with a mood disorder increases likelihood for developing MDD, rates are not compelling, as having a relative with a mood disorder only confers a 21% risk (Trivedi et al., 2008). Recent research has been able to conduct direct genetic comparisons, where the actual DNA from depressed and nondepressed people is compared. This method is helpful in finding a specific gene that expresses MDD. Early research in this area has been able to uncover differences in the genetic location of dopamine and serotonin receptors between MDD and non-MDD patients (Iga, Ueno, & Ohmori, 2008).

1.2.7 Summary: Knowledge of the Causes of Depression Increases the Competency to Treat

Clinicians who are knowledgeable about how depression is presented and the various risk factors associated with depression are often better at determining an effective course of treatment

for patients than those who do not keep abreast of the field. In determining the best course of treatment for patients with MDD, providers should do a thorough assessment of family history, life events, culture, illness, and coping style before determining the treatment needed. As an example, someone with a particularly severe depression who also has a family history for mood disorders may need to consider both psychotherapy and antidepressant medication in the treatment plan. As biological and genetic research proceeds, we may also be seeing a development toward individualized treatment based on genetics, biology, and behavior. As an example of work related to this notion of individualized treatment, Alexopoulus et al. (2008) have recently completed an National Institute of Mental Health (NIMH)-funded study of problem-solving therapy (PST) for depression in older adults with vascular depression. This depression is characterized by increased apathy, trouble with problem solving, planning, and initiation and is also known to be unresponsive to antidepressant medication. This study has found that a targeted intervention, with PST targeting the behavioral deficits associated with vascular depression, is a very successful treatment in case where antidepressant medication is not.

1.3   Assessment

One of the most critical tools that competent providers who treat depression have is the assessment tool that they use to diagnose MDD and track treatment outcomes. Tools are generally used as guides to help providers make decisions about the severity of the case and whether or not treatment needs to be adjusted along the way. These tools, however, are not the only means by which treatment decisions are made, but rather support and contribute to providers' clinical judgment. Early in training, providers often rely more heavily on these tools in making treatment decisions, but as they gain more experience, these tools often begin to serve as a means for confirming advanced clinical judgment. Below, we describe the different tools that providers can access in working with their clients with MDD.

1.3.1   Diagnostic Tools

Diagnostic tools were originally developed to help researchers characterize their clinical samples and to conduct large-scale epidemiological studies. The principle behind these tools is consistency from assessor to assessor in deriving a diagnosis. The need for such accuracy and consistency came from research indicating that even experts, when left to their own devices, make considerable mistakes when making diagnosis, and rarely there is a consistent agreement between expert evaluators about how to best diagnose patients. Although the need for diagnostic accuracy and consistency is clear for research, some have argued that this level of accuracy is not as important in clinical work. We beg to differ. Given that the effects of evidence-based treatments are ascertained on groups of patients who were diagnosed in a specific way, it behooves the provider to make similarly accurate diagnosis in order to pick the right treatment for their client.

The most widely known diagnostic tools used in research are the Structured Clinical Interview for DSM-IV (SCID), the Composite International Diagnostic Interview (CIDI), and the Mini-International Neuropsychiatric Interview (MINI). Our focus will only be on the SCID and the MINI. The CIDI was developed for lay interviewers working in epidemiological

studies and is neither feasible in clinical practice nor does it allow for clinical judgment in determining a diagnosis. The SCID and MINI are considered semi-structured interviews. Questions or prompts in the tools are meant to help to guide providers toward a diagnosis, but can be answered through clinical observation of the client. Both tools cover all Axis I disorders in the DSM. In both tools, each diagnosis starts with a few gating questions, that if answered positively, guides the clinician to continue to assess for the presence of that disorder. If the gates are answered negatively, the interview, if deemed appropriate by the clinician, moves onto the next diagnosis. There is no particular advantage in selecting one instrument over another. Both are highly accurate in detecting Axis I disorders, and both have been translated into several languages. Both are also in the public domain.

1.3.2   Treatment Tracking Tools

Treatment tracking tools, sometimes referred to as screeners, are self-report/client-completed tools that measure the severity of clients' symptoms. These tools were originally developed as screening tools, that is, instruments to help identify potentially depressed clients. There are several tools on the market, but the best known are the Beck Depression Inventory (BDI; Beck, 1961), the Geriatric Depression Scale (GDS; Yesavage, 1982), and the Patient Health Questionnaire (PHQ-9; Spitzer, Williams, Kroenke, Hornyak, & McMurray, 2000). All of these instruments share in common a solid research base with excellent psychometric properties, brief administration times, easy readability, and translation in several languages. Selecting one tool over another becomes one of convenience and patient population. Our own personal favorite is the PHQ-9 because it is very brief, taking only 2 min to complete, the questions map on directly to the DSM-V symptoms of depression, it assesses for suicide and impact of symptoms on daily functioning, and is the only tool listed that has shown to be sensitive to changes in depression over time, making it an excellent treatment tracking tool. The BDI has several advantages including extensive use in research, and additional mood-related questions that extend beyond the DSM. It also assesses for suicide. The main disadvantage is that the BDI is not in the public domain. Copies must be purchased. The GDS is also an excellent tool, the main advantage being its widespread use in older adults and disabled populations. The main disadvantage is that the items do not map exactly onto DSM criteria, and it does not ask about suicide.

1.3.3   Factors to Consider in Diagnosis

Despite high prevalence of depression in the general population, the well-documented negative consequences associated with untreated depression, and the ample assessment and screening tools available for early detection and recognition of depression, this disorder often goes unrecognized in a variety of clinical settings. For instance, researchers found that only 50% of the depressed individuals who sought assistance in primary care clinics were diagnosed as depressed (Perez-Stable, Miranda, Munoz, & Ying, 1990). Similarly, others found that about half of community-dwelling older adults who suffered from depression were recognized as depressed by a health-care provider (Garrard et al., 1998). Barriers to early detection and recognition of depression may be at the system level, at the provider level, and at the consumer

level. In this chapter, we focus on three major barriers to early detection and recognition of depression: health, age, and culture in relation to these three levels.

1.3.4 Health

As already stated in this chapter, there is a strong connection between depression and physical health (Cassem, 1995). This connection goes both ways, as research has shown that higher levels of depression can cause greater medical comorbidity and vice versa. Given this bidirectional relationship (Benton, Staab, & Evans, 2007), it is not surprising that the rates of comorbid depression and medical illness can be over 40% in certain medical populations (Bukberg, Penman, & Holland, 1984; Burg & Abrams, 2001). Hence, physical health is certainly a factor one has to consider when assessing for depression.

A thorough assessment requires attention not only to emotional functioning, but also to physical functioning and medication intake. This is because many medical conditions, including neurological disorders, endocrine disorders, chronic pulmonary disease, and sleep apnea, may cause or worsen depression. Similarly, medications, such as corticosteroids, antihypertensives, and certain cancer chemotherapeutic agents, may also cause or worsen depression.

Many medical patients do not present with clear psychological symptoms, such as depression or anhedonia, but instead report considerable somatic symptoms of fatigue, lack of appetite, and poor concentration. Hence, the diagnosis of depression in medically ill populations is often a challenge (Katon, Kleinman, & Rosen, 1982). Four approaches can be used to assess for depression in the medically ill (Cohen-Cole & Stoudemire, 1987). According to the *inclusive approach*, depressive symptoms are counted regardless of whether they may be related to physical illness (Rifkin et al., 1985). The *etiological approach* suggests that physical symptoms are counted only if they are not considered to be a result of the physical illness (Rapp & Vrana, 1989). The *substitutive approach*, on the other hand, suggests that psychological symptoms of depression replace the physical ones (Endicott, 1984). Finally, the *exclusive approach* suggests removing symptoms from the diagnostic criteria of depression, if they are not found to be more frequent in depressed physically ill individuals compared to nondepressed physically ill (Bukberg et al., 1984).

Nonetheless, there is still considerable debate as to which approach is most appropriate. One study evaluating the effect of using the various approaches in the case of post-stroke depression concluded that modifying the DSM-IV criteria because of the presence of physical illness was unnecessary (Fedoroff, Starkstein, Parikh, Price, & Robinson, 1991). On the other hand, others found that a diagnosis of major depression based on criteria modified for patients with medical illness is a better predictor of mortality than a diagnosis based on the inclusive criteria, arguing that the substitutive approach is preferable (Cavanaugh, Furlanetto, Creech, & Powell, 2001).

Because medically ill individuals usually seek treatment within primary care clinics or other medical settings, the specific setting has to be taken into consideration. Many medical settings may not allow for more than a short visit and in some settings privacy may be compromised (Schappert, 1992). In addition, medical illness often takes the priority and less attention is usually given to psychological conditions. Hence, adequate evaluation of depressive symptoms might be extremely challenging in medical settings.

Another potential barrier for adequate evaluation of depression in the medically ill is a potential bias at the provider level. It is not uncommon for providers to think that depression is justified given the medical situation of the individual. Hence, normalizing depression by the provider may result in underdiagnosis (Goldman, Nielsen, & Champion, 1999).

1.3.5   Age

Old age may pose yet another barrier for accurate diagnosis of depression. Similar to the medically ill, depression often goes unrecognized in older adults. For instance, a recent study has shown that whereas 17% of the nursing home residents suffered from depression, depression was detected in less than half of these individuals (Davison et al., 2007). A different study conducted at hostels for individuals with cognitive impairments found that whereas 39% of participants suffered from depression, less than 50% were diagnosed as depressed (McCabe, 2006).

Because medical illness is a common occurrence in old age, many of the considerations discussed in the previous section also apply here. Yet, older adults have several additional characteristics that may complicate the diagnosis of depression in this population even further. In this section, we discuss the differential symptom pattern of depression in old age, cognitive impairment, and beliefs about depression and old age as important factors that have to be taken into consideration when evaluating depression in older adults.

Differential Symptom Pattern of Depression in Old Age. There is some research suggesting that manifestation of depression is different in older adults versus younger adults. One study of over 6,000 participants found that dysphoria was less likely to be endorsed by older adults (Gallo, Anthony, & Muthen, 1994). This difference between older and younger adults remained even 13 years later at a follow-up study, suggesting that this is not a cohort effect, but potentially an age-related effect (Gallo, Rabins, & Anthony, 1999). Similarly, another study found that relative to younger adults, older adults were less likely to exhibit cognitive-affective symptoms, but the two groups did not differ in relation to report of somatic-performance symptoms (Goldberg, Breckenridge, & Sheikh, 2003).

Cognitive Impairment. Cognitive impairment is common in old age, with as many as 20% of the general population of older adults suffering from mild cognitive impairment (Manly et al., 2008), and about 5% suffering from dementia (Eefsting, Boersma, Van den Brink, & Van Tilburg, 1996). Depression is considered one of many neuropsychiatric symptoms (e.g., agitation, hallucination, apathy) that often co-occur in the presence of dementia, with over 20% of the individuals who suffer from dementia also suffering from depression (Ballard, Bannister, Solis, Oyebode, & Wilcock, 1996). To complicate things even further, in some older adults, depression may present as pseudodementia, characterized by slowness of thought and speech as well as concentration difficulties (Saez-Fonseca, Lee, & Walker, 2007). Unlike dementia, pseudodementia can be reversible; there is clearly an incentive to differentiate the two. Nonetheless, treating depression is obviously an important task also in the case of individuals with cognitive impairment or dementia as depression significantly compromises their quality of life.

A major difficulty associated with the diagnosis of depression in this population of older adults with cognitive impairments is the fact that many older adults at the more severe stages of dementia are unable to express themselves or to provide reliable information about their situation. To address these difficulties, specific depression rating scales that are based on observational data or informant report rather than self-report were developed. One example is the

Cornell Scale for Depression in Dementia. A measure that was specifically developed to assess signs and symptoms of major depression in dementia based on informant report (Alexopoulos, Abrams, Young, & Shamoian, 1988).

Another barrier to accurate diagnosis of depression in older adults with dementia is the fact that depression in patients with Alzheimer's disease (AD) has different qualities from the depression seen in major depression with no concomitant AD (Olin, Katz, Meyers, Schneider, & Lebowitz, 2002). A group of experts under the National Institute of Mental Health sponsorship proposed specific criteria for the diagnosis of depression in AD. These criteria place a lesser emphasis on verbal expression and include irritability and social isolation as symptoms of major depression. In order to meet the criteria for depression in AD, the individual has to have AD accompanied by a change in functioning characterized by three or more of the symptoms listed in ❯ Table 1.1 within a 2-week period. At least one of the symptoms has to be depressed mood or reduced pleasure in usual activities. A study comparing the utility of this diagnostic mechanism relative to standard DSM-IV criteria found that the NIMH provisional criteria for depression in AD yielded a much higher prevalence rate of depression in patients with AD (Vilalta-Franch et al., 2006).

Beliefs About Depression and Old Age. The stigma of mental illness may be yet another barrier for accurate diagnosis of depression in older adults, especially when accompanied by lack of knowledge about depression (Sirey et al., 2001). Both older adults and their physicians may attribute depression to normal aging, grief, or physical illness (Gallo et al., 1994; Uncapher & Arean, 2000). As an example, researchers found that older adults with depression who attributed their depression to old age were less likely to seek professional care or discuss their symptoms (Sarkisian, Lee-Henderson, & Mangione, 2003).

1.3.6 Culture

Culture is considered as the cumulative deposit of knowledge, beliefs, values, and meanings shared by a group of people. There is ample research demonstrating ethnic disparities in the

◘ **Table 1.1**

National Institute of Mental Health Provisional Diagnostic Criteria for Depression of Alzheimer's Disease

Significant depressed mood: sad, hopeless, discouraged, tearful
Decreased positive feelings or reduced pleasure in response to social contacts and usual activities
Social isolation or withdrawal
Disruption in appetite that is not related to other medical conditions
Disruption in sleep
Agitation or slowed behavior
Fatigue or loss of energy
Feelings of worthlessness or hopelessness or inappropriate excessive guilt
Recurrent thoughts of death, suicide plans or suicide attempts

diagnosis of depression (Stockdale, Lagomasino, Siddique, McGuire, & Miranda, 2008). These differences may be partially attributed to variability in symptom report in different ethnic groups. The report of distress among different cultural groups is related to the nature of the stresses presented, the attitudes toward mental illness, the meaning attributed to the symptoms, and the coping mechanisms and resources available to the particular cultural group (Chung & Singer, 1995).

Researchers have argued that level of "Westernization" is associated with variations in self-report of depressive symptoms. People from Western cultures are said to psychologize their depression (i.e., emotional and cognitive report of distress), whereas people from non-Western cultures are said to somatize their depression (i.e., report of distress in the form of bodily complaints and physiological symptoms) (Katon et al., 1982; Kleinman, 1982). Somatization of depressive symptoms has been observed in various cultures such as China (Ryder et al., 2008), United Arab Emirates (Hamdi, Amin, & Abou-Saleh, 1997), and India (Raguram, Weiss, Channabasavanna, & Devins, 1996), whereas psychological report of depression was found among more "Westernized" groups of non-Western societies (Kim, Li, & Kim, 1999). Nonetheless, research suggests that somatic report of depression is common among Western cultures as well (Mattila et al., 2008).

Provider characteristics have also been identified as potential factors that impair the accurate diagnosis of depression in different cultural groups. According to Adebimpe (1981), race of the clinician, social and cultural distance between client and clinician, stereotypes of psychopathology in different cultural group, and biased diagnostic instruments may explain misdiagnosis of ethnic minorities. For instance, whereas epidemiological studies suggest equivalent prevalence rates of depression among Black and White Americans (Zung, MacDonald, & Zung, 1988), in clinical practice, Blacks are more likely to receive a diagnosis of psychotic disorder and less likely to receive a diagnosis of mood disorder relative to Whites (Strakowski et al., 2003).

1.3.7 Genetics

As already noted, depression is at least partially accounted for by genetic makeup. Hence, the inevitable question is whether we could or should screen for genetic susceptibility of depression (Morley, Hall, & Carter, 2004). Apparently, the predictive strength of the various candidate genes is modest at best, suggesting that an individual who has a particular allele that has been found to be associated with depression has around twice the risk of developing a mood disorder relative to an individual who does not. However, because multiple susceptible alleles and environmental factors are considered to increase the risk for depression, information from genetic testing becomes less useful. In addition, to date, there are no clear pharmacological or psychological interventions that could be used for prevention in individuals who have genetic susceptibility to depression in the absence of the condition. It is also unclear what the impact of genetic testing would be on the mental health and social standing of genetically at risk individuals and their family members (Morley et al., 2004).

1.3.8 Family

Although familial screening for depression is not the norm, the one instance in which familial screening has been recommended is the case of mothers bringing their children for the

treatment of depression. Reportedly, a substantial number of mothers who bring their children for depression treatment are also depressed, yet their depression often goes unrecognized and untreated (Ferro, Verdeli, Pierre, & Weissman, 2000). It also is recommended to screen for depression in family caregivers of individuals with severe medical illness, psychiatric impairments, or cognitive impairments, as caregiving is a highly taxing role associated with high levels of depression (Carol, 2003; Ratnakar et al., 2008).

1.3.9 Placebo Effects

The placebo effect in depression is considered to be of great magnitude. One factor that has shown to increase the placebo effect is the therapeutic effect of assessment contacts. A recent meta-analysis found that follow-up assessments in antidepressant treatment trials account for 40% of the therapeutic effect for participants on placebo. Moreover, these researchers have argued that the therapeutic effect of the initial evaluation meeting is even larger (Posternak & Zimmerman, 2007). Hence, clinicians should be aware of the fact that attention and care exhibited during standard assessment procedures are of great impact and often account for improvement in depressive symptoms.

Provider Competencies: Understanding Factors Related to Diagnosis. Clinicians facing the diagnosis of major depression have to conduct a thorough assessment not only of the mental health functioning of the individual, but also of his or her medical and cognitive functioning. In this chapter, we outline some of the potential barriers for accurate diagnosis of depression. These barriers may be at the consumer, provider, or setting level.

1.4 Maintenance Factors of the Disorder

As already noted, depression is more often a recurrent or chronic condition than a single episode (Kessler et al., 2003). Relative to acute depression, chronic depression is characterized by greater medical comorbidity, impaired functioning, and increased health-care utilization (Crown et al., 2002; Weissman, Leaf, Bruce, & Florio, 1988). One major problem associated with the understanding of chronic depression is a lack of consistent definition. According to the DSM-IV, the specifier "chronicity" can be applied to major depression, if it has lasted for over 2 years. The specifier "incomplete inter-episode recovery" is applied, if symptoms no longer meet criteria for major depression, but residual symptoms are still present. Dysthymia (i.e., as episode of less severe depressive symptoms that lasts at least 2 years) is also characterized by a chronic course. Furthermore, although not listed in the DSM-IV, the term "double depression," which refers to depression superimposed on dysthymia also characterizes a chronic course of depression (Keller & Lavori, 1984). In addition, the DSM-IV proposed a classification of depressive personality as a category for further research. To date, there have been several attempts to differentiate between these various classifications of chronicity, but the majority of the studies did not yield consistent differences (McCullough et al., 2000; Remick, Sadovnick, Lam, Zis, & Yee, 1996). To complicate issues even further, there is the term "treatment-resistant depression," which is characterized by failure of at least two consecutive antidepressant trials. Although treatment-resistant depression is not synonymous with chronic depression, it often results in a more chronic course of depressive illness.

Here, we will discuss several factors responsible for the maintenance of depression, including inadequate diagnosis and treatment, genetic/familial predisposition, early childhood experiences, comorbid medical and psychiatric illnesses, and personality style/disorder.

Inadequate Diagnosis and Treatment. As we have already noted, there is ample research demonstrating inadequate detection of depression in a variety of settings. Moreover, even when depression is detected, it often is poorly managed. According to results from the National Comorbidity Survey Replication, 57% of depressed individuals receive some type of treatment, but only 21% receive treatment that is considered adequate (Kessler et al., 2003).

Although the course of untreated or poorly treated depression has not been extensively studied due to ethical reasons, a meta-analysis of randomized controled trials, in which one group was a wait-list control, found that about 20% experience a spontaneous remission in their depressive symptoms without any treatment. Although impressive, compared to a 50–60% response rate to pharmacological and nonpharmacological interventions, this finding reemphasizes the importance of early detection and adequate treatment of depression (Posternak & Miller, 2001). Similarly, research has shown that a longer interval between the onset of depression and the receipt of treatment is associated with a poor prognosis (Scott, Eccleston, & Boys, 1992).

Genetic/Familial Predisposition. There is some research suggesting that individuals who have a family history of dysthymia or personality disorder are more likely to suffer from chronic depression (Klein et al., 1995). Chronic depression was also found to be familially aggregated especially in the early onset cases (Mondimore et al., 2006). Others found that having a co-twin with a history of depression predicted a slower recovery from major depression (Kendler, Walters, & Kessler, 1997).

Early Childhood Experiences. The finding that early onset depression is associated with a more chronic course of depression has led to hypotheses about early childhood experiences as predictors of chronic depression. There is considerable research demonstrating that early childhood adversities are associated with a more chronic course of depression (Riso, Miyatake, & Thase, 2002). Although, both childhood trauma, loss of object relations, and early separations have been examined as potential predictors of chronic depression, childhood trauma has received the strongest support (Akiskal, King, Rosenthal, Robinson, & Scott-Strauss, 1981; Durbin, Klein, & Schwartz, 2000; Kendler et al., 1997; Weissman & Klerman, 1977; Zlotnick, Warshaw, Shea, & Keller, 1997).

Comorbid Medical and Psychiatric Illnesses. Comorbid medical illness and psychiatric illness have shown to be associated with a chronic course of depression. In a 5-year follow-up study of the outcomes of dysthymic disorder, researchers found that comorbid anxiety disorder was associated with a lower probability of recovery (Hayden & Klein, 2001). Comorbid substance abuse disorders and suicidality were also found to predict a more chronic course of depression (Mondimore et al., 2007). Others have used the term "chronic secondary depression" (Akiskal et al., 1981) to refer to individuals with chronic medical conditions, such as dementia, stroke, and arthritis who suffer from chronic depression.

Personality Style/Disorder. The term depressive personality proposed by DSM-IV as a research category implies that some aspects of chronic depression are thought to share characteristics with personality disorders. Indeed, personality disorders are more commonly found in individuals who suffer from chronic depression, such as dysthymia relative to individuals who have acute depression (Hayden & Klein, 2001; Pepper et al., 1995). In addition, there is considerable research demonstrating that neuroticism (i.e., emotional instability characterized by vulnerability to stress and anxiety) is a strong predictor of chronic depression (Duggan, Sham,

Lee, Minne, & Murray, 1995; Weissman, Prusoff, & Klerman, 1978). However, it has been argued that it is hard to tell whether personality disorders are a precursor of chronic depression or whether the two share a common etiology (Riso et al., 2002).

1.4.1 Provider Competencies: Understanding Maintenance Factors

In this section, we outline several mechanisms responsible for the maintenance of depression. Because these are largely nonmodifiable, clinicians may use this information as "red flags" indicating that further attention is necessary. Particularly in cases where clients are not responding to treatment, providers may need to reassess for family and genetic contributions to depression that may point in a different treatment direction, or providers may need to assess for potential comorbid substance abuse or personality disorder. Having an understanding of the factors that contribute to persistence of depression will help in better treatment decisions for those clients who fail to respond.

1.5 Mechanisms of Change Underlying the Intervention

As one would expect, there is a considerable interest in the mechanisms responsible for change and reduction in depressive symptoms. Gaining a better understanding into these mechanisms can assist in the development and refinement of theories about the etiology of depression as well as assist in the development of specific therapeutic interventions for depression. Given the magnitude of research on the topic, this section is focused on some of the more prominent mechanisms.

Illness Characteristics. Ample research has demonstrated that a more severe level of depressive illness (Lam, Green, Power, & Checkley, 1994; Trivedi, Morris, Pan, Grannemann, & Rush, 2005), a greater number of past depressive episodes, a family history of depression (Trivedi et al., 2005), a longer depressive course, and an early onset of depression are all associated with poorer prognosis. Hence, those individuals who suffer from milder depression are more likely to experience change either following therapy or spontaneously.

Placebo. As already noted, the placebo effect is particularly strong in individuals with depression. According to a meta-analysis comparing the placebo effect to pharmacological treatment of depression, the mean proportion of patients who respond in the placebo group is about 30%, whereas the greatest response in patients receiving medication is 50%. In fact, there is some research suggesting that as the attributed effect of psychotropic medications of the new generation had increased so did the placebo effect (Walsh, Seidman, Sysko, & Gould, 2002). Given the strong effect placebo has on the course of depression, clinicians should utilize the placebo effect for their benefit by instilling in patients beliefs in the ability to change. Importance of beliefs in the successful treatment of depression is demonstrated by a study that found that at the end of successful treatment, individuals assigned to the medication arm were less likely to believe in psychotherapy as an effective treatment for depression, whereas those assigned to the psychotherapy arm were less likely to believe in the effectiveness of medication (Leykin, DeRubeis, Shelton, & Amsterdam, 2007).

Motivation. Research suggests that depression is often associated with a deficit in motivation (Cohen, Weingartner, Smallberg, Pickar, & Murphy, 1982; Layne, 1980). Instilling motivation

in patients is important because higher motivation for change has been associated with better treatment outcomes. Although not specific to depression, the technique of motivational interviewing designed to prepare and activate individuals in the direction of change has gained considerable popularity in treating a variety of disorders, including depression (Westra, 2004).

Adherence to Treatment. Despite the many innovations in the field of psychotherapy and pharmacotherapy, rates of treatment nonresponse are still significant. This is at least partially due to nonadherence or inadequate adherence to treatment. There is ample research demonstrating that those individuals who adhere more closely to their treatment regime are more likely to benefit from their medication treatment (Melfi et al., 1998). It is also true for psychotherapy trials that have consistently shown that those individuals who complete their homework assignments are more likely to benefit from therapy (Cowan et al., 2008). In fact, one hypothesis suggests that the combination of psychopharmacology and psychotherapy in the treatment of depression is more effective than psychopharmacology alone because the psychotherapy component encourages adherence to psychopharmacological treatments (Basco, 1995).

Cognitive Changes. The study of cognitive changes as mediators of change in depressive symptoms is largely attributed to the cognitive theories of depression. According to these theories, depression is a result of maladaptive schemas or core beliefs (Beck, Rush, Shaw, & Emery, 1979). Hence, one would expect that changes in these maladaptive schemas would result in lower levels of depression. Research has largely supported this assumption and shown that changes in dysfunctional thoughts and attributions mediate the effect of depression treatment (Barber & DeRubeis, 2001; Quilty, McBride, & Bagby, 2008).

In many cases, however, the effects of certain cognitive changes as a result of therapy were not specific to cognitive-behavioral therapy, but were instead observed in patients undergoing behavioral therapy or medication therapy as well (Garratt, Ingram, Rand, & Sawalani, 2007; Jacobson et al., 1996). Furthermore, acquisition of adaptive skills is considered common to both cognitive-behavioral and psychodynamic approaches despite the fact that the two use different terminology and radically different approaches (Badgio, Halperin, & Barber, 1999). Hence, it appears that unrelated to the therapeutic modality employed, those individuals who are able to adapt a more adaptive form of thinking are more likely to recover from their depression.

Social Support. The beneficial effects of social support are well documented and include higher rates of quality of life and lower medical and psychiatric illness (Bell, LeRoy, & Stephenson, 1982). Furthermore, there is a strong body of evidence demonstrating that individuals of greater social support and those married or living with a partner are more likely to benefit from therapy and overcome adverse life events (Brown, Adler, & Bifulco, 1988; Paykel, 1994; Trivedi et al., 2005). Interestingly, even expected social support plays a role in recovery from depression. Specifically, those individuals who expressed higher levels of ideal social support were less likely to recover from their depression (Lam et al., 1994).

Religiosity. Similar to social support, the beneficial effects of religiosity are also well documented. Religious individuals have shown to enjoy a longer life span as well as better physical and psychological health (Clark, Friedman, & Martin, 1999). A recent study has shown that religiosity also plays a role in recovery from depression. A retrospective study followed 94 medically ill older adults, diagnosed with depression. The study found that those individuals who reported intrinsic religiosity, but not those who reported more frequent church visits, had a shorter time to recovery from their depression (Koenig, George, & Peterson, 1998).

Provider Competencies: Understanding the Factors Related to Change. This section has outlined several mechanisms thought to be responsible for change. Whereas some, such as illness characteristics, are nonmodifiable, others such as the placebo effect, motivation, and adherence to treatment may be utilized by the therapist to enhance the effects of therapy. A great advantage of the majority of these mechanisms is that they have not shown to be specific to a certain therapeutic modality, but instead affect change across a variety of treatment options.

1.6   Evidence-Based Treatment Approaches

It is important to distinguish between what is meant by evidence-based practice (EBP) and evidence-based treatment (EBT). EBP is a concept that was derived from medicine in the 1970s (McKibbon, 1998). The concept was developed to help clinicians move beyond clinical lore in making treatment decisions, by ensuring that clinicians and clients have sufficient information about the efficacy and safety of a treatment before deciding to employ it. In order to improve health care, physicians must be aware of the state-of-the-art treatment and assessment and select those treatments based on clinical judgment and client input. EBP has been conceptualized as a three-legged stool, with clinical judgment, evidence-based treatment, and client preference all equal in developing effective treatment plans (McKibbon). EBT, on the other hand, is one of the legs on the three-legged stool that is EBP. EBT is the actual intervention selected by the clinician and client to address an illness, and is an intervention that has been researched sufficiently to determine its efficacy and safety in treating the disorder. For MDD, a number of effective interventions are available. Interventions with an evidence base include antidepressant medication, electroshock therapy, and psychotherapy. A whole book, let alone a chapter, could be dedicated to the array of evidence-based treatments available to people with major depression. We dedicate our discussion here to evidence-based psychotherapies for adult populations with major depression.

How an Intervention Becomes an EBT. There are several guidelines for determining whether interventions can be an EBT, and the most reliable guidelines evaluate the quality of the research and the degree to which there is an agreement between the studies that the intervention is effective. The most notable guidelines include the Kaufman Best Practice Approach, which specifies that an EBT should be based in sound theory, have treatment guidelines, have been studied in at least one randomized clinical trial, and is safe (Kaufman Best Practice Project, 2004); The Center for Reviews and Dissemination (Khan, 2001) considers treatments to be EBTs, if there are more than two randomized clinical trials that ensure true randomization and concealment about treatment condition, thorough description of the intervention, and the use of intent-to-treat analyses only; the National Registry of Evidence-Based Programs and Practices (NREPP, 2008) specifies that interventions are evaluated on the quality of the research supporting it and readiness for dissemination. Quality of the research is judged on a 0–4 scale on several quality criteria that include reliability of the measures used, validity of the measures, intervention fidelity, management of missing data, potential alternative explanations for outcomes based on the data, and the appropriateness of the data analysis and interpretation. Readiness for dissemination is determined by the same 0–4 quality scale regarding how available implementation materials are, if there are training and support services, and if any quality improvement materials exist; and finally, the American Psychological Association Guidelines focuses primarily on the rigor to which an intervention has been studied,

existence of a manual, and the degree of agreement between studies regarding treatment effects (Chambless & Hollon, 1998).

In considering these methods for determining EBT, we compiled our own list of chatacteristics defining EBT: there are two or more randomized trials demonstrating positive outcomes, the research is of high quality with regard to methods, measures, implementation, and data analyses, and finally there is a mechanism by which others can replicate the treatment in their settings. Using these criteria, the following psychotherapies have been found to be EBTs for MDD: cognitive-behavioral therapy (CBT), behavioral activation (BA), interpersonal psychotherapy (IPT), and problem-solving treatment (PST). We discuss each intervention in terms of the theory, practice, evidence base, and safety.

Cognitive-Behavioral Therapy (CBT). CBT has become an umbrella term for a series of interventions that share commonalities with regard to how depression is viewed and treated. Cognitive-behavioral treatments share in common a focus on cognitions, assumptions, beliefs, and reactions that are a function of, or contribute to, major depression symptoms, with the aim of changing appraisals to affect emotional change.

These interventions include cognitive therapy (CT; Beck, 1993) and mindfulness-based cognitive therapy (MBCT; Segal, Teasdale, & Williams, 2002). Although these two interventions are similar in theory and focus, they vary in how emotion and change in behavior are addressed. We note here that some authors have also included problem-solving therapy (PST; Nezu, Nezu, & Perri, 1998; Mynors-Wallis, Gath, Day, & Baker, 2000) under this category of EBT, but because of its unique process, its relatively recent designation as an EBT, and its growing popularity in non-mental-health settings, we discuss that treatment in a separate section. Similarly, authors will often include behavioral activation under the CBT category of treatments, but because of its unique process and its minimal focus on cognition and appraisals, we will give this intervention its own section.

Cognitive Therapy. CT was developed by a psychiatrist, Aaron T. Beck, who conceptualized his theory of affective disorders after concluding from his clinical practice that clients who improved from treatment did so through a process of changing their interpretation of events in their current lives and their belief in themselves as effective change agents. In his earlier work, Beck focused primarily on helping clients overcome common "errors in thinking" that he found to be related to depressive emotion and behavior. Errors in thinking included making arbitrary and negative inferences of events in clients' lives, overgeneralizing negative events and minimizing positive events, and selective attention to the negative things in life. These errors in thinking are considered to be just below clients' level of awareness, and in the process of helping become more aware of those thoughts; the correlation between those thoughts and moods and subsequently, how they interact with other people and solve problems are the paramount aims of treatment (Beck, 1993). Beck has since amended his theory to also include the concept of "schemas," which are the lens by which clients process information about themselves and the world. Errors in thinking arise from these schemata, and the ultimate way to treat depression is to better understand the schema underlying the errors in thinking and change that lens to a more objective, realistic perspective. Once the schema changes, errors in thinking change creating more positive affect.

The evidence base for CT as a depression intervention is very strong, and highly positive (Whitfield & Williams, 2003). In a recent review of the CBT literature, Kuyken, Galgliesh, and Holden (2007) found that CT was as effective as antidepressant medication for treating acute depression and for preventing relapse of depression as well. However, there are clients with

chronic recurrent depression, where cognitive schemas are so ingrained that they are resistant to change. Additionally, there has been little evidence that when compared directly to other interventions, such as behavioral activation and brief dynamic therapy, the intervention has any added advantage in treating this type of major depression (Whitefield & Williams). One review found that investigator allegiance to CT seemed to result in better outcomes than when CT was studied by an independent group (Gaffan, Tsaousis, & Kemp-Wheeler, 1995). However, most experts in depression treatment consider CT to be an efficacious treatment alternative that has ample support for adults in all age groups (Mackin & Arean, 2005) and ethnic minority populations (Miranda et al., 2003).

Mindfullness-Based Cogntive Therapy (MBCT). MCBT (Segal et al., 2002) is a combination of CT and mindfulness-based stress reduction intervention developed by Jon-Kabat-Zin in the 1980s. Segal et al. took the MBSR model and adapted it for use in patients who have chronic recurring depression. It is an 8-week, often group-based course, that has been studied primarily as a relapse prevention intervention. Mindfulness has its roots in Buddhism, in which people are taught to focus on the present, acknowledge thoughts from moment to moment without passing, one way or another, and instead respond to the situation, rather than react to it. Instead of challenging errors in thinking, as is done in traditional CT, clients are taught to just be aware of their thoughts and subsequent impulses to act on those thoughts and are then taught how to reshift their focus from the thoughts to the situation in front of them. The main principle taught to clients is that no amount of meditation or therapy can make clients' lives pain-free; however, the way to cope with pain is to be continually shifting one's focus from reacting emotionally to a situation, and then respond to the situation, without passing judgment.

Treatment consists of a combination of CT techniques and mindfulness exercises. Using experiential exercises, such as object focus techniques and thought journaling, clients learn to recognize patterns in their thinking early on, and then how to respond to thoughts as ideas, rather than facts. Additionally, clients learn to see patterns in how they react to situations, with the aim of helping them choose a different way to respond to negative situations, rather than being on automatic pilot.

MBCT has largely been studied as an intervention to recurrence of major depressive episode: and thus, most of the research has focused on prevention effects. The research has largely been positive. One study found that in 145 participants with chronic recurrent depression who were successfully treated with medication, only 35% of those receiving MBCT as a prevention measure relapsed 1 year after treatment compared to 66% of those who did not receive MBCT (Teasdale et al., 2000). The UK National Institute for Health and Clinical Excellence (NICE) has recently endorsed MBCT as an effective treatment for prevention of relapse. However, it should be pointed out here that there has been no independent replication of MBCT as a prevention intervention; a majority of the research on MBCT is done by the MBCT group in Ottawa.

1.6.1 Behavioral Activation

Behavioral activation (BA) is a third-generation behavioral therapy for depression. BA was originally one component of Beck's original incarnation of CBT. It became a stand-alone intervention when Jacobson et al. (1996) conducted a dismantling study, comparing CT, BA, and CBT as treatments for depression and found that the CT component added little to the

treatment effects of CBT. This finding has been supported several times, most recently by Dobson et al. (2008) who found that CT did not add any benefit, and in more severe depression, BA was superior to CT as a treatment for depression and as effective as an antidepressant medication.

Operant theory of behavior is the main theoretical underpinning of BA. According to this theory, depression is a function of punishment and negative reinforcement and too little positive events. Take for instance a client who moves to a new city and is looking for a new group of friends. The client may initially feel optimistic about his or her chances of finding new friends because of past successes in acquiring friends in his or her hometown. However, as months go by and the client unsuccessfully makes new friends, his or her attempts at friendship become punished by the feeling of rejection. Over time, the client stops trying to make new friends and avoids social situations all together. This avoidance results in a decrease in the negative consequences of engaging socially, and so, the act of avoidance is reinforced. Eventually, because of the social isolation, the client eventually begins to have too few positive social events. As a result, the client becomes lonely, isolated, and eventually depressed.

Based on the above theory, BA attempts to change the clients' behavior by increasing the likelihood that they will experience positive consequences to behavior they have given up, or, in cases where the behavior itself may be the cause of the negative consequences, teach clients new behaviors that will produce more positive consequences. Using our relocated client as an example, the BA therapist works with the client to create a list of social activities that are ordered from most likely to pursue to least likely to pursue. Starting with the easiest task, the client creates a plan to engage in that positive situation between sessions and measures his or her mood before and after engaging in the activity. In the case of our client, he or she may feel more comfortable starting a conversation with someone at work before joining an activity with people the client does not know. The task would be small and doable, perhaps to ask the co-worker if they want to step out for coffee. If the therapist and client determine that part of the problem is a lack of social skills, then together, the client and therapist will practice new skills to ensure the client has a positive interaction. Over the course of therapy, the client works through this list of activities until their depression remits and they feel comfortable pursuing more complex activities on their own.

As stated above, the evidence for BA is growing strong. In the 1990s, Jacobsen et al. studied the relative merits of BA compared to CT and found consistently that BA was an effective, stand-alone intervention. More recently, researchers found that BA was particularly good for patients with severe depression (Coffman, Martell, Dimidjian, Gallop, & Hollon, 2007). In a recent meta-analysis by Cuijpers, van Straten, and Warmerdam (2007), BA was found to have very large effect sizes, although the differences in effect sizes of BA compared to CT were not statistically significant. In addition to having positive effects as a depression treatment, BA is particularly attractive because it is a cost-efficient intervention, requiring very little additional skill learning for the therapist and client, and could be delivered by people with varying levels of expertise.

1.6.2   Interpersonal Therapy

Interpersonal therapy (IPT) is a brief supportive therapy for depression that was originally developed as a psychotherapy control condition for the Collaborative Treatment for Depression

Study, a large randomized trial comparing CBT to antidepressant therapy for treating major depression. The intervention was developed by Gerald Klerman and Myrna Weissman, after reviewing hundreds of hours of therapy tapes and identifying the commonalities between all therapies (Klerman, Weissman, Rounsaville, & Chevron, 1984). In the collaborative study, IPT was found to be as effective as CBT in treating depression, and because of its supportive nature and similarities to psychodynamic therapies, IPT became a popular depression intervention.

Although it was originally a control condition for research, it has since been indicated that IPT is based in Sullivanian Theory of social behavior. Harry Stack Sullivan was an analyst who felt that traditional psychodynamic theory did not capture the current state of society well, and that main issues driving psychopathology and neurosis were interpersonal needs and interactions. People who are depressed are unaware of their effect on others, and only pay attention to certain aspects of their social interactions. He felt that for analysis to be effective, therapists must elicit specific details about interpersonal interactions, so that facts about behavior become conscious, and the client is more aware of his/her impact on others and their role in interpersonal problems. IPT takes this conceptualization of human behavior and further refines it. According to IPT, depression is a function of interpersonal difficulties and the goal is to help clients realize what they can do to change maladaptive relationships. Depression is considered a function of four main conflict areas: grief, role dispute, role transition, and interpersonal deficits.

The evidence for IPT is quite strong and largely positive. IPT has been found to be quite effective for treating depression in younger adult populations and young Latina mothers, in particular. However, its efficacy in older or geriatric populations is not promising. Most research on IPT in treating geriatric depression has found it to be relatively ineffective, and in some cases, worse than placebo (Reynolds et al., 2006).

1.6.3 Problem-Solving Treatment

Problem-solving treatment (PST) is a relatively new EBT for treating major depression. Although it was originally conceptualized by Nezu and D'Zurilla in the 1980s, it has not been until recently that this intervention has received any recognition as an effective depression treatment. There are two forms of PST, the original developed by Nezu et al. (1998) called social problem-solving therapy (SPST), and the one developed by Mynors-Wallis as a depression intervention for primary care medicine (PST-PC; Mynors-Wallis et al., 2000). Although developed independently and in two different countries, the two models are nearly identical in theory and practice, differing only in how problem-solving process is taught to clients. In SPST, each step of the process is taught sequentially; the first session involves explaining the whole problem-solving process, the first week details the first step, the second week the second steps, and so forth. Further, SPST includes a step called problem orientation, an explicit exercise to help clients overcome negative perceptions about their ability to solve problems. PST-PC teaches the process in one session, as one cohesive tool to help clients solve problems, and refinement in the execution of each step is done over each subsequent session and application of the tool. Because PST-PC was meant to be an intervention for non-mental-health providers, problem orientation is not taught explicitly, as the creators found that non-mental-health providers had a difficult time grasping and teaching this concept effectively. The theory behind both interventions is identical. Depression is a function of either poor

problem-solving skills or learned helplessness, a concept originally posited by Seligman, Weiss, Weinraub, and Schulman (1980). People with poor problem-solving skills are vulnerable to become depressed because of a lack of effective skills in proactively developing solutions for day-to-day problems. In other cases, people who where originally effective problem solvers stop using these skills when they are faced with repeated failed attempts to solve problems. The goal of PST therefore is to either teach an effective method for solving social problems or help reinforce existing problem-solving skills that may have fallen by the wayside because of depressed mood.

The evidence for PST is quite positive as a treatment for major depression. According to a recent meta-analysis by Cuijpers et al. (2007), PST is effective in treating depression, but it is an effective intervention for some groups of patients and not for others. For instance, the effects of PST on geriatric depression, even in older adults with mild cognitive impairments, physical disability, or severe illness are very strong (Arean et al., 1993; Arean, Hegel, Vannoy, Fan, & Unuzter, 2008); however, clients with milder depression do not appear to do quite as well (Williams et al., 2000).

1.6.4 EBTs for Special Populations: Older Adults, Ethnic Minorities, Disabled Populations, and Co-occurring Disorders

One of the limitations of psychotherapy research in general is that most of the research is focused on physically healthy volunteers. Further, to study efficacy of these treatments on depression, the samples have often excluded older adults, physically ill, and adults with co-occurring illnesses. Thus, the generalizability of the research has been called into question by providers who work in community-based settings where clients are not similar to the participants in research. In the last 15 years, however, there is a growing evidence base that the EBTs discussed above can be effective for special populations.

With regard to ethnic minorities, a number of studies have found that CBT (Miranda et al., 2003), IPT (Rossello & Bernal, 1999), and PST (Arean et al., 2008) can be effective in these populations, and each intervention has been translated into several languages. Older adults also respond well to CBT (Gallagher-Thompson & Thompson, 1996) and PST (Arean et al., 1993), but not to IPT (Reynolds et al., 2006). Those with chronic illnesses also respond to CBT and PST. For instance, CBT has been found to be effective for patients with multiple sclerosis (Mohr, Hart, & Vella, 2007). CBT is also useful for disabled populations, in that it has been adapted for telephonic delivery, with highly positive results. Unfortunately, there has been very little research on the effects of these interventions in dually diagnosed populations.

1.6.5 Training Competencies in EBTs

Each EBT discussed below has training programs that any provider can participate in, for a cost. These trainings have many similarities, which include an introductory workshop, followed by provider application of the intervention, under the guidance of a trained expert. Below, we describe the process for each intervention reviewed above.

CT. Training in CT can be acquired in a number of ways, but the first place to go if providers are interested in training in this model is the Beck Institute for Cognitive Therapy

(www.beckinstitute.org-training). Interested providers must hold at least a master's degree in a mental health or health profession. Providers apply to participate in the training, which can be online or in person. Providers first participate in a 2-day workshop, either at a national conference, the Beck Institute, or one arranged by the provider in training. The workshop provides an overview of CT. Providers can elect a 6-month or 1-year training, which involves audiotape or videotape review of CT sessions and weekly individual telephone supervision. Once a provider becomes competent in CT, he or she is eligible to become a trainer. This requires weekly telephone review of supervision cases. As of this writing, tuition for the 1-year program is US$8,075 and US$4,550 for the 6-month program.

PST. Providers interested in learning PST can find trainers from the University of Washington IMPACT Web site (www.impact-uw.edu). This Web site is funded by the Hartford Foundation and provides a free introduction to PST, and access to a PST trainer. Feedback is not free, although the cost of training is reasonable. PST experts can be found throughout the USA, but if there is no expert in your location, the training can be done over videoconferencing, telephone, or Skype. As of this writing, training is approximately US$2,500 for the workshop and supervision. If the workshop is online, then the cost is US$1,500.

Providers do not need to have a prior working knowledge of major depression or experience in mental health, although Hegel et al. (2004) found that people with a mental health background, particularly in CT, tend to need less training than those who are mental health novices. Training consists of a 1-day overview workshop, which can be done online for free, and two to three supervised training cases. Training cases are audio taped, and the first, middle, and last session for each case is sent to the expert for review. Reviewers rate each tape on the provider's ability to cover each of the problem-solving steps, as well as basic clinical functions, such as structuring the therapy hour, working collaboratively with the client, demonstrating warmth and empathy, and ability to handle difficult or crisis situations. The difficulty level of the client is also considered in the ratings; however, providers in training are encouraged to find mildly depressed patients for their very first PST case. Once the provider in training has demonstrated proficiency in PST, he or she is then certified and is eligible to participate in a monthly, toll-free call to discuss new or complicated cases. In our experience, most providers are basically competent by the end of the training period, but usually appreciate the opportunity to discuss difficult cases after certification. Providers are eligible to become expert trainers after having used PST for 1 year on at least 20–30 cases.

BA. We were unable to locate any formal training program in BA. Based on our review of the research standards for BA research therapists, the training criteria is similar to that of PST. Providers interested in BA participate in a workshop on the principles of BA. Once they complete the workshop, providers participate in audio taped or videotaped supervision of at least three cases, which are rated for fidelity to the model by an expert in BA. Providers receive feedback on their cases, and are certified once they have successfully completed cases.

IPT. We report here the guidelines for IPT training that are listed on the International Society for Interpersonal Therapy (ISIPT) Web site (http://www.interpersonalpsychotherapy.org). Providers interested in learning IPT should have a good understanding of major depression and experience in mental health before beginning training (contrary to PST and BA). Training can be obtained by contacting the ISIPT Web site for locations of workshops and official trainers.

ISIPT delineates training into four levels: level A provides general information on IPT to curious providers, level B involves basic IPT training, level C involves more intensive

supervised training, and level D is training to become a trainer. Level A training is a 2-day introductory training course that is offered at professional conferences or occasionally as continuing education units. Those who complete level A and wish to learn how to provide IPT participate in level B. (Only those who have participated in an ISIPT-approved level A workshop can move onto level B training.) Providers must have the IPT manual for major depression and identify at least two cases that are willing to be videotaped or audio taped for training. All 16 sessions of IPT are sent to a certified IPT trainer, who reviews a random sample of 12 tapes. Providers receive a minimum of 4 h of supervision on their cases, either in individual or group format. Level C training occurs when the provider has been carrying at least two cases in IPT for a year. These providers still receive monthly supervision during the year and are encouraged to attend IPT-focused conferences. Level D training can only happen once level C training is completed. The provider must have a minimum of ten supervised cases in IPT. Providers wishing to be trainers must join a regional group of trainers, and if none exists, they must create one. They must also attend the Trainers' Workshop and two conferences a year in IPT.

1.7 Basic Competencies of the Clinician

After each section detailed above, we provided a summary of how the information in each section represents an important competency for providers working with MDD clients. In this section, we discuss how providers can acquire these basic competencies. To reiterate, the basic competencies for treating major depression are:

- Ability to adequately detect and monitor depression and rule out other competing diagnoses
- How to use assessment, research, and client history to make an informed case formulation
- Ability to apply what we know about maintenance factors and mechanisms of change in MDD to amending treatments
- Ability to apply evidence-based treatment in the context of evidence-based practice

All new providers should begin the process of developing competencies by working with an expert in major depression, particularly an expert in at least one EBT. This expert can help new providers fine-tune their assessment, formulation, and treatment skills, and provide information on the latest developments in the depression field. To illustrate how novice providers can acquire these skills, we describe the process we have used to train psychology interns, psychiatry residents, research therapists, and community providers at the University of California, San Francisco, Over-60 research and training program.

1.7.1 Detecting and Monitoring Major Depression

Our typical approach to training providers in the assessment of major depression involves a combination of in-services reviewing of the information discussed in the sections on assessment and risk factors for major depression, participant observation of assessment, and guided, in vivo training opportunities. After novice providers have completed the didactic part of our training, they then watch videos of clients with different presentations of major depression,

and while watching the videos complete a SCID on the videotaped client. Afterwards, novice providers and assessment experts discuss the cases and the results of the SCID. Once the expert and novice feel that the novice provider is ready, the provider then watches the expert conduct two to three clinical interviews with clients. This is followed by expert observation of the novice provider conducting two to three interviews. The novices are then ready to conduct interviews on their own, some of which are videotaped for continued training opportunities. Depending on the providers' backgrounds and experience with mental health issues, novice providers generally become competent assessors of major depression within 6 months of training.

1.7.2 Case Formulation

As detailed in the excellent article by Sim, Gwee, and Bateman (2005), case formulation is the working hypothesis that guides treatment decisions, without which the process of therapy would become haphazard. Case formulations involve combining information from assessment tools, client history, knowledge of the common causes of depression, and a treatment theory. Information detailed in a case formulation varies by the theory from which the case is being conceptualized. As an example, Persons' case formulation model for CT indicates that to make a CT formulation, seven components must be in place, including the clients' problem list, schema, triggers, client problem history, a hypothesis, treatment plan, and barriers to treatment. Whereas an interpersonal formulation includes a summarizing statement, assessment of the primary area of conflict, self-psychology model, prognosis, and prescription. Sim et al. (2005) indicate that while the content of a formulation may theoretically vary, the quality of case formulation can be measured across all theoretical types from these five aspects of a competent case formulation: integrative, explanatory, prescriptive, predictive, and therapist.

An integrative case formulation is one that succinctly combines all the information on a case and identifies the key issues to be worked on clearly. A competent formulation also provides a theoretical explanation for presenting problem and is supported by evidence collected in the initial assessment, client's history, and over the course of treatment. Competent formulations are also prescriptive, in that a clear treatment plan evolves logically from the explanation of the factors contributing to the presenting problem.

At UCSF, we train novice providers in case formulation in the following way. As stated in the section on assessment, our providers are given in-services on the latest information about risk factors, causes, and correlates of major depression, and the factors that are likely to contribute to relapse. We provide a comprehensive overview of biological, genetic, psychosocial, cross-cultural, and developmental research on major depression. Trainees are required to make case presentations of initial formulations based on one of the EBTs they are learning during the course of treatment; the trainer periodically asks the trainee to make adjustments in their formulation based on the course of treatment. At the end of treatment, the formulation is again reviewed and refined.

1.7.3 Application of Evidence-Based Treatment

Competent application is more than knowing how to do an EBT and how to apply it in the context of evidence-based practice. Under the section on EBTs, we discussed how one can

become accredited in each psychotherapy. Here, we describe the process involved in applying those treatments competently.

In order to be an effective psychotherapist in treating major depression, providers must have the following set of competencies. First, they must be well trained in at least one evidence-based practice, ideally two. The advantage of knowing two EBTs allows the provider to be flexible for clients who may have a preference for a certain type of therapy. Second, providers should know how to formulate a treatment plan based on the EBT being used. Third, providers should not apply EBTs in a vacuum. As described in the section under evidence-based practice, clinical judgment and client preferences should be part of the decision regarding which treatment to use. Fourth, providers must learn to be flexible within the EBT they are using, not applying the specifics of a manual in a cookbook fashion, but adjusting the pacing and specifics of the intervention to be most effective. Fifth, providers must be aware of the limits of the research and keep abreast of new developments in treatment development; in other words, good psychotherapists do not form firm allegiances to theories, but keep an open and objective mind when new information is available about existing interventions, modifications of these interventions, and new theories and treatments for major depression. No one intervention is appropriate for all client populations.

1.8   Expert Competencies of the Clinician

A definition of an expert in any field is someone who possesses the latest information about the field and can apply and teach that information flexibly and innovatively. In MDD, that amounts to having ample exposure to working with clients who are suffering from MDD and learning the latest developments in MDD. The main difference between being competent and being an expert is in the depth of understanding. Competent MDD providers typically are trained to conduct state-of-the-art assessment and treatment and can create useful treatment plans based on case formulation. Competent therapists sometimes have trouble in working with clients suffering from MDD that is complicated by other comorbidities, or who are not making improvements to treatment as expected.

In training providers in PST, providers who are newly certified tend to still need guidance on how to use PST in situations where the client does not understand the model or who behave differently in treatment than the clients in the certification phase. Expert opinion and advice are often needed in the first 6 months post certification to help the competent PST provider work with the model in a flexible way and tailor the intervention to the unique characteristics of the client or help the PST provider decide whether or not PST will be effective for the client. In our experience, after 6 months of such expert consultation, most competent PST providers no longer need expert guidance, and can often offer advice to others who are just learning the ropes. Thus, competent PST providers understand the PST model and provide the intervention under the best situations; expert PST providers can not only use PST in more complex cases, but also have enough judgment and flexibility to know when PST may not be the best treatment for a client.

1.9   Transition from Basic Competence to Expert Competence

How one becomes an expert in MDD is a bit more difficult to describe. Based on our personal experiences and in pooling MDD experts around the USA about when and how one becomes

a depression expert, we were able to delineate the process by which one moves from being simply competent in MDD to being an expert. First, the most important factor in becoming an expert is the working time with MDD patients. The more you assess and treat, the better you become as an MDD provider. A second and important addition to time is working and communicating with other MDD experts. It is not enough to simply treat clients with MDD. One must also confer with colleagues and consider fresh perspectives on the illness. An advantage in being a researcher in MDD is that through academic activities, one routinely works and interacts with other experts, reading their work, engaging in discussion about MDD, and having others comment on their work related to MDD. Clinicians can emulate this practice by attending meetings, joining groups of MDD clinicians, and routinely reading the literature. Another avenue toward being an expert is training others in how to assess, understand, and treat MDD. Many experts in MDD are often educators who work with professionals and students wanting to learn the state-of-the-art assessment and treatment. Finally, although no one was willing to put a timeline to when one can be considered an expert, most felt that if a provider worked primarily with clients suffering from MDD and routinely interacted with other experts in the area, expertise could be reached on an average after 2 years of this exposure. Everyone conceded that this timeline would vary from person to person.

1.10 Summary

MDD is one of the best-studied mental health illnesses. We have considerable information about how MDD presents, factors that put people at risk for MDD, factors that complicate treatment, what assessment tools work best, and which treatments are most effective for most people with MDD. Although more research is needed to understand how to best treat specific clients with more complex presentations of MDD, providers do have enough information available to effectively assess and treat a majority of the clients they will see with MDD. Becoming competent as an MDD therapist requires learning all one can about the illness and the different treatments available and becoming skilled at delivering evidence-based treatment within the context of evidence-based practice.

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2 Bipolar Disorder

Timothey C. Denko · Michael E. Thase

Abstract: Bipolar Disorder has long been considered to be a condition best managed by pychopharmacologically and psychotherapy specific to bipolar disorder has only recently been a subject of interest.

In our overview in this chapter on bipolar disorder we examine nosology of the DSM-IV bipolar disorders, review diagnostic criteria for manic and hypomanic episodes, discuss epidemiology and psychiatric co-morbidities and describe the clinical course of bipolar disorder.

Prominent agents in the pharmacologic management of bipolar disorder are discussed as the foundational maintenance factors in bipolar disorder with a review of the putative pros and cons of management with lithium, anti-epileptic drugs, atypical antipsychotics, and standard antidepressants.

Three manual based psychotherapies have been studied under controlled conditions in bipolar disorder; family focused therapy, cognitive therapy, and interpersonal social rhythms therapy. We summarize the principles of these interventions as well as outcome data of clinical studies for these interventions in the management of people with bipolar disorder.

In basic competencies, some of the more common and difficult issues with differential diagnosis are considered, including differentiating unipolar major depressive disorder, borderline personality disorder, and schizophrenia from bipolar disorder. Topics in psychoeducation are presented. The section on expert compentencies expands on these principles, and discusses the use of diagnostic instruments such as the Structured Clinical Interview for Diagnosis (SCID) of DSM-IV TR Mental Disorders, screening instruments such as the Mood Disorders Questionaire (MDQ), and rating instruments such as the Young Mania Rating Scale (YMRS) Hamilton Rating Scale for Depression (HAM-D) and the Montgomery-Asberg Depression Rating scale (MADRS).

2.1 Overview

Nosology, epidemiology, and clinical course will comprise our overview of bipolar disorder.

2.1.1 Nosology

Bipolar disorder, formerly termed "manic depression," actually comprises four diagnoses (using DSM-IV nomenclature) – bipolar 1 disorder, bipolar 2 disorder, bipolar disorder not otherwise specified (NOS) and cyclothymia. A diagnosis of bipolar 1 disorder is assigned to an individual who has experienced at least one lifetime episode of mania (see ❯Table 2.1), provided this episode is not considered to have been triggered by a substance (such as an

◉ Table 2.1
DSM-IV criteria for a manic episode

A. A distinct period of abnormally and persistently elevated, expansive, or irritable mood, lasting at least 1 week (or any duration if hospitalization is necessary) is required for the diagnosis
B. During the period of mood disturbance, three (or more) of the following symptoms have persisted (four if the mood is only irritable) and have been present to a significant degree:
(1) Inflated self-esteem or grandiosity
(2) Decreased need for sleep (e.g., feels rested after only 3 h of sleep)
(3) More talkative than usual or pressure to keep talking
(4) Flight or ideas or subjective experience that thoughts are racing
(5) Distractibility (i.e., attention too easily drawn to unimportant or irrelevant external stimuli)
(6) Increase in goal-directed activity (either socially, at work or school, or sexually) or psychomotor agitation
(7) Excessive involvement in pleasurable activities that have a high potential for painful consequences (e.g., engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments)
C. The symptoms do not meet criteria for a mixed episode
D. The mood disturbance is sufficiently severe to cause marked impairment in occupational functioning or in usual social activities or relationships with others, or to necessitate hospitalization to prevent harm to self or others, or there are psychotic features
E. The symptoms are not due to the direct physiologic effects of a substance (e.g., a drug of abuse, a medication, or other treatment) or a general medical condition (e.g., hyperthyroidism). Manic-like episodes that are clearly caused by somatic antidepressant treatment (e.g., medication, electroconvulsive therapy, light therapy) should not count toward a diagnosis of bipolar 1 disorder

antidepressant, steroid, substance of abuse) or metabolic disorder (hyperthyroidism, for instance). Please note that there is no requirement for any depressive episodes in assigning a diagnosis of bipolar 1 disorder, although major depressive episodes (MDEs) are very common in individuals with this diagnosis.

International classification of disease (ICD-10) offers a more colorful description of a manic episode.

Mood is elevated out of keeping with the individual's circumstances and may vary from carefree joviality to almost uncontrollable excitement. Elation is accompanied by increased energy, resulting in overactivity, pressure of speech, and a decreased need for sleep. Normal social inhibitions are lost, attention cannot be sustained, and there is often marked distractibility. Self-esteem is inflated, and grandiose or overoptimistic ideas are freely expressed. Perceptual disorders may occur, such as the appreciation of colors as especially vivid (and usually beautiful), a preoccupation with fine details of surfaces or textures, and subjective hyperacusis. The individual may embark on extravagant and impractical schemes, spend money recklessly, or become aggressive, amorous, or facetious in inappropriate circumstances. In some manic episodes, the mood is irritable and suspicious rather than elated. The first attack occurs most commonly between the ages of 15 and 30 years, but may occur at any age from late childhood to the seventh or eighth decade.

The episode should last for at least 1 week and should be severe enough to disrupt ordinary work and social activities more or less completely. The mood change should be accompanied by increased energy and several of the symptoms referred to above (particularly pressure of speech, decreased need for sleep, grandiosity, and excessive optimism).

A diagnosis of bipolar 2 disorder is made in the person who has experienced recurrent MDEs and has had at least one lifetime episode of hypomania (see ❯ Table 2.2 for DSM-IV criteria for a hypomanic episode). The MDEs should meet DSM criteria for major depressive disorder (MDD), but if an individual is diagnosed with any of the bipolar disorders, an additional diagnosis of MDD should *not* be made.

What distinguishes bipolar 1 from bipolar 2 is the severity of the episode of mood elevation, with mania being more severe and requiring a diagnosis of bipolar 1. Mania can be distinguished from hypomania in a number of ways. Mania requires 7 days duration, while hypomania requires only 4 days. Psychosis is only found in mania, and its presence automatically "upgrades" a mood episode from hypomania to mania. Admission to a psychiatric facility because of behavior associated with mood elevation similarly automatically requires a diagnosis of mania to be made instead of hypomania. One more difficult aspect of differentiating mania from hypomania is "marked impairment in social or occupational functioning," which mania causes and hypomania cannot cause (by definition). There can be significant room for judgment with this criterion, and decisions pertaining to important personal relationships (i.e., romantic relationships begun or ended) or professional (changing jobs) or academic choices made may not be clearly attributable to mood elevation, and as such may not clearly indicate a diagnosis of mania.

A diagnosis of bipolar disorder precludes certain additional diagnoses. For instance, one individual cannot simultaneously be diagnosed with MDD and bipolar disorder. Bipolar disorder "trumps" MDD. Certainly an individual can have a MDE associated with bipolar disorder. DSM-IV uses specifiers for both bipolar 1 and bipolar 2 disorders, that is, the most recent episode (MRE) depressed, if in fact, a MDE is present. Additionally, a

◘ **Table 2.2**

DSM-IV criteria for a hypomanic episode

A. A distinct period of persistently elevated, expansive, or irritable mood, lasting throughout at least 4 days, that is clearly different from the usual non-depressed mood is required for the diagnosis
B. During the period of mood disturbance, three (or more) of the following symptoms have persisted (four if mood is only irritable) and have been present to a significant degree:
(1) Inflated self-esteem or grandiosity
(2) Decreased need for sleep (e.g., feels rested after only 3 h of sleep)
(3) More talkative than usual or pressure to keep talking
(4) Flight of ideas or subjective experience that thoughts are racing
(5) Distractibility (i.e., attention too easily drawn to unimportant or irrelevant external stimuli)
(6) Increase in goal-directed activity (either socially, at work or school, or sexually) or psychomotor agitation
(7) Excessive involvement in pleasurable activities that have a high potential for painful consequences (e.g., the person engages in unrestrained buying sprees, sexual indiscretions, or foolish business investments).
C. The episode is associated with an unequivocal change in functioning that is uncharacteristic of the person when not symptomatic
D. The disturbance in mood and the change in functioning are observable by others
E. The episode is not severe enough to cause marked impairment in social or occupational functioning, or to necessitate hospitalization, and there are no psychotic features
F. The symptoms are not due to the direct physiologic effects of a substance (e.g., a drug of abuse, a medication, or other treatment) or a general medical condition (e.g., hyperthyroidism)

Note: Hypomanic-like episodes that are clearly caused by somatic antidepressant treatment (e.g., medication, electroconvulsive therapy, light therapy) should not count toward a diagnosis of Bipolar II disorder.

person cannot be diagnosed with both schizophrenia and bipolar disorder. If an individual has prominent symptoms of hypomania or mania in the context of chronic symptoms of schizophrenia, then the correct diagnosis would be schizoaffective disorder-bipolar type.

Other specifiers used to categorize current symptomatology of the bipolar disorders include: MRE manic (bipolar 1), mixed (bipolar 1) hypomanic (bipolar 1 or bipolar 2). A mixed episode describes an individual having simultaneously symptoms sufficient to make a diagnosis of mania and symptoms sufficient to diagnose a MDE. Additional specifiers include, with postpartum onset, with catatonic features, mild/moderate/severe with or without psychotic features. Course specifiers can also be used and include with/without interepisode recovery, seasonal pattern, and rapid cycling.

Rapid cycling is defined as four or more mood episodes during the previous 12 months, and can be used in describing bipolar 1 or 2 disorder. The four (or more) episodes can be of any polarity, and are demarcated by either remission (for 8 weeks) or switch toward the opposite polarity.

Bipolar disorder NOS would be an appropriate diagnosis for the individual with recurrent MDEs, but never having had a DSM hypomanic episode (i.e., sub-threshold hypomania). Frequently in clinical practice, the duration of 4 days is what keeps a period of mood elevation from meeting the threshold for a DSM-IV hypomanic episode. However, a diagnosis of bipolar disorder type 2 can be made using clinical judgment, even with, let us say, only 3 days duration of hypomania, as DSM stresses on diagnostic criteria as guidelines and as such DSM-IV permits flexibility in the assignment of diagnoses.

Cyclothymia remains a DSM-IV diagnosis in the bipolar category and is used for individuals who have depressive episodes that do not meet criteria for MDEs, and periods of mood elevation that may or may not meet criteria for hypomania (but never mania – this would automatically make the diagnosis bipolar disorder type 1). These episodes are "numerous," both depressive and hypomanic, and this mood disturbance needs to be present for at least 2 years. Curiously, if a manic or mixed episode emerges after 2 years, both diagnoses, bipolar disorder type 1 and cyclothymia, may be diagnosed. If an episode of depression meets threshold criteria for a MDE after 2 years, both cyclothymia and bipolar disorder type 2 are diagnosed.

Cyclothymia has elicited minimal interest as a diagnostic entity, and to our knowledge no Food and Drug Administration (FDA)-approved treatment for cyclothymia is available. Very little clinical research is published on this condition and we remain curious if this diagnostic category will survive another iteration of the DSM.

2.1.2 Epidemiology

According to the National Comorbidity Survey Replication (an epidemiologic survey of mental illness that included more that 9,000 households), the lifetime prevalence for bipolar 1 or bipolar 2 disorder is 3.9% (Kessler, Berglund et al., 2005) and the 12-month prevalence for these disorders is 2.6% (Kessler, Chiu, Dempler, & Walters, 2005). Individuals with bipolar disorder are at high risk to also suffer from comorbid anxiety spectrum disorders, impulse control disorders, and substance use disorders. For instance, 60.3% of people with bipolar 1 disorder had a lifetime substance use disorder with rates falling in bipolar 2 disorder to 40.4% (Merikangas et al., 2005). Lifetime anxiety disorder prevalence in people with bipolar disorder is even more striking with rates exceeding 80% for both bipolar 1 and bipolar 2 disorder (Merikangas et al.).

In addition to high frequency or comorbid axis 1 disorders, people with bipolar disorder are thought to have very significant rates of personality disorder, although small sample sizes, nonrandom selection of subject population, as well as overlap between characteristics of certain personality disorders and mood disorder symptoms make definitive estimates of comorbidity difficult. One large epidemiologic survey, the Wave 2 National Epidemiologic Survey on Alcohol and Related Conditons reports borderline personality disorder (BPD) comorbid with bipolar disorder (Grant et al., 2008) in 50.1% of people with bipolar 1 disorder and 39.4% in bipolar 2 disorder. Men with bipolar disorder in this sample were slightly more likely than women to have co-occurring BPD. This study interviewed more than 34,000 individuals, and overall rates of BPD (5.6% of men, and 6.2% of women) in this sample were much higher than reported in the National Comorbidity Survey Replication (NCS-R) estimate of less than 1.5%; i.e., all cluster B personality disorder 1.5%. (Lenzenweger, Lane, Loranger, & Kessler,

2008). The NCS-R, however, also reported an odds ratio of 12.5 for bipolar 1 or bipolar 2 disorder co-occurring with BPD.

2.1.2.1 Clinical Course

Bipolar disorder primarily affects the young, with 25% of cases seen by age 17, and 50% of cases by the age of 25, but an estimated 10% of cases emerge after the age of 50. (Kessler, Berglund et al., 2005) While mood elevation is the hallmark of bipolar disorder, depression is much more common. In a prospective study or patients with bipolar 1, 146 patients were followed with weekly mood charting for an average of 14 years. (Judd et al., 2002) Roughly 50% of the time, patients were euthymic, and patients spent about one third of the time with some level of depression (ranging from a MDE to dysthymia). Roughly 10% of the time, patients had some degree of mood elevation, and 6% of the time was mixed of cycling. Another large study of bipolar patients, The Stanley Foundation Bipolar Network, reported 1 year clinical outcomes of patients undergoing optimal pharmacologic care and were disappointed with only 32.9% of patients being considered minimally ill or well, 40.7% intermittently ill and 26.4% of patients being ill most of the year. (Post et al., 2003).

Patients with bipolar 2 disorder were also followed prospectively for more than 14 years (Judd et al., 2003) Only 46% of time was spent euthymic, with some degree of depression present 50% of the time. Less than 4% of the time was spent hypomanic or cycling.

Bipolar disorder is often a recurrent, relapsing illness. With subsequent episodes, time spent well interepisode (i.e., cycle length) is thought to shorten. (Goodwin & Jamison, 2007) Untreated episodes, both manic and depressive, are thought to last approximately 3 months (Goodwin & Jamison). Long-term outcomes can be variable, but as described above, depression appears to predominate. Rates of all causes of mortality are inordinately high in people with bipolar disorder, and death attributed to suicide estimated in one large cohort study in Sweden was calculated to be about 15–20 times higher than that of the general population. (Osby, Brandt, Correia, Ekbom, & Sparen, 2001)

	Mania/hypomania	Depression
Appearance	Common to be "overdressed," possibly seductive, excessive makeup	Trending toward disheveled, ill-kempt, depending on severity of depression
Psychomotor	Agitation (can be pacing, leg jigging), movements quick	Retardation
Speech	Rapid, pressured, loud	Less spontaneity, slower, can be excessively quiet
Thought process	Illogical, flight of ideas, loose associations	Less commonly thought disordered
Thought content	Grandiose delusions Hyperreligiosity	Less often delusional, may have nihilistic delusions or delusions of catastrophe
Insight	Many times poor to nil	Usually intact

2.2 Recognition of Symptoms and Their Assessment

Bipolar disorder symptomatology can reflect a manic/hypomanic state, mixed state, euthymia, or depression. Signs of mania or hypomania that can be observable include level of arousal, dress, or speech. Individuals experiencing mania or hypomania can exhibit psychomotor agitation with restlessness, fidgetiness, as well as movements that are quicker than normal. They may display impatience in the waiting room. In elevated mood states, men may "overdress" for the occasion, such as wearing a suit jacket solely for a clinician visit. Women may be dressed more provocatively, or more colorfully, and be wearing more makeup or perfume than is customary when the individual is euthymic. A cardinal symptom of elevated mood can be rapid or pressured speech. At its most extreme, pressured speech is difficult to interrupt, and the person with mania can talk without the clinician being able to get in appropriate responses or questions before the subject is back to talking. Pressured speech may be louder than normal, but not necessarily so.

Elevated mood is also associated with disturbances in thought. Prototypically, grandiosity, or at its most extreme, delusions or grandeur can be exhibited by the bipolar individual in a manic condition. Grandiosity is the unfounded belief that someone is more talented or has abilities outside what would be expected from someone's background or educational achievements (i.e., a manic person might believe they will end world hunger, or discover a cure for cancer). Grandiose people might wish to have an audience with the President of the United States. Not all disorder in thought content (as opposed to thought process) in a manic person is grandiose. Paranoia – that is fear of being harmed or watched – is common, as is hyperreligiosity. Formal thought disorder – flight of ideas and loose associations – can be coincident with delusions or independent of delusions in mania. Illogical thought processes at times are necessary in order for delusional beliefs to be maintained.

The depressed condition in bipolar disorder is in many ways opposite to mania in terms of what is observable. Instead of psychomotor agitation as seen in mania, bipolar depression can have an associated psychomotor retardation. Patients might take extra time going from the waiting room to the office. Dress and appearance (i.e., grooming, makeup) can be less neat. Clothes may be wrinkled or dirty.

The opposite of pressured speech can be displayed by the person with bipolar depression. Speech characteristic of depression is in general slower, with less prosody (i.e., the natural rise and fall of tone in normal speech) and less spontaneous. At its most extreme, the profoundly depressed individual may have latency in response, little more than monosyllabic responses, monotony, and low volume.

2.2.1 Maintenance Factors

2.2.1.1 Pharmacotherapy of Bipolar Disorder

There are currently 11 agents with FDA labeling for some aspect of bipolar disorder. (i.e., depression, mania, mixed episode, maintenance). Most of these treat mania, with only two agents FDA-approved for bipolar depression (quetiapine and olanzapine/fluoxetine combination [OFC]), and four maintenance drugs; lithium, aripiprazole, olanzapine, and lamotigine. Most clinicians view any antimanic drug as a maintenance drug, particularly if it appeared beneficial when used to treat an episode of elevated mood.

2.2.1.2 Antimanic Drugs

Currently FDA-approved treatments for acute mania include the standard "mood stabilizers" carbamazepine (Tegretol, Equetro), lithium (Eskalith, Lithobid) and divaproex (Depakote, Depakote ER) and most of the second generation, or "atypical" antipsychotics (AAPs): aripiprazole (Abilify), quetiapine (Seroquel), olanzapine (Zyprexa), risperidone (Risperdal) and zipasidone (Geodon). Chlorpromazine (Thorazine), a first-generation antipsychotic, also carries an indication for the treatment of mania. Lithium and divalproex have been studied in numerous head-to-head clinical trials in the treatment of mania, without there being a clear cut "winner." While head-to-head studies of the second-generation antipsychotics are quite rare (see Perlis, Baker et al., 2006, for example), a meta-analysis of AAPs in the treatment of mania (Perlis, Welge et al., 2006) concludes that there is not a significant difference in response rates among the five currently available AAPs.

2.2.1.3 Divalproex (Depakote)

Originally an antiepileptic drug (AED), divalproex (Depakote) has been used in the treatment of acute mania since the early 1990s, and in the USA, is the most popular traditional mood stabilizer prescribed. In clinical trials, divalproex typically yields response rates of approxima-tely 50%, while placebo response rates tend to fall in the 25–30% range. Divalproex is thought to be preferred in dysphoric mania (Swann, Bowden, Calabrese, Dilsaver, & Morris, 2002). Patients are usually "loaded" with 25 mg/kg in three divided doses, and a target blood level of 75–125 μg/dL has been shown to yield optimal clinical results. (Allen, 2006). Patients require hepatic enzyme and complete blood count monitoring, quarterly, while on this agent, as divalproex can suppress platelet production, and can be somewhat hepatotoxic.

Side effects from divalproex can include alopecia (hair loss), weight gain, and cognitive dulling. In women, divalproex has been linked to hyperandrogenism (high levels of androgen) which leads to hirsutism (hair growth where it does not belong), acne, male-pattern alopecia (hair loss) and irregular menstruation. In a sub-study of the Systematized Treatment Enhancement Program for Bipolar Disorder (STEP-BD) Joffe et al. (2006) compared menstrual period abnormalities and androgen levels in women in treatment for bipolar disorder. They reported androgenizing in divalproex-treated patients at a rate of 10.5% (9/86 patients) as compared to 1.4% (2/144 patients) for patients on other AEDs or lithium. Divalproex is also teratogenic, that is linked to birth defects, specifically with neural-tube closure, leading to spina-bifida.

Divalproex ER (extended release) is a new formulation of divalproex which can be administered once daily. Absorption of divalproex ER is approximately 80% of the comparable original divalproex formulation (confusingly called "DR" – delayed release). For example, 2,000 mg of divalproex ER is thought to have the bioavailabilty equivalent to 1,600 mg of divalproex DR. Time to peak level after ingestion is 7–14 h, and the manufacturer recommends morning dosing so that the peak plasma levels occur closer to bedtime. Trough levels, which should be drawn to guide dosing, need to be 24 h after ingestion, so as to avoid spuriously elevated levels. Divalproex is commonly not administered correctly – dosing at bedtime, with blood sampling in the morning. This can lead to daytime somnolence (when divalproex

levels are peaking) and underdosing (due to blood-level peaks being drawn in the morning) rather than a 24 h trough as is recommended.

2.2.1.4 Lithium

Lithium, for decades the mainstay in bipolar disorder pharmacologic management, has fallen out of favor among many prescribers of late, despite thousands of patient-years of clinical data supporting its utility in both the maintenance phase and manic phase of treatment. Lithium continues to perform well, generally equivalently, when compared to newer agents such as divalproex (Bowden et al., 1994) and quetiapine (Bowden et al., 2005) in acute mania trials, and is often used as an active comparator in maintenance studies, being compared to lamotrigine and olanzapine. (Goodwin et al., 2004) (Tohen et al., 2005) Lithium remains a first-line recommended agent for the treatment of bipolar depression, according to the Texas Medication Algorithm Project (Suppes et al., 2005).

Lithium can have troublesome adverse effects including weight gain, acne, polyuria (excessive urine production) and increased thirst. Patients require blood monitoring for renal and thyroid function, as these both can be negatively affected by lithium. Care must be taken by anyone prescribing medication to individuals already on lithium, particularly blood pressure medications, as ACE inhibitors (captopril, enalapril, capoten, vasotec) and thiazide diuretics (hydrochlorothiazide [HCTZ]) can impair renal excretion of lithium leading to lithium toxicity. Capozide is a branded antihypertensive combining a thiazide and an ACE inhibitor as is Vaseretic.

Lithium appears to confer some protection against attempted and completed suicide (Goodwin et al., 2003). Interest in lithium may be returning with a large **National Institute of Mental Health** (NIMH) study looking at the effects of moderately dosed lithium (600 mg for the first 8 weeks of a 26-week study), the results of which are unavailable at the time of publication.

2.2.1.5 Carbamazepine

While popular in Europe for decades, carbamazepine, originally an AED, only recently became an FDA-approved treatment for mania in the USA. Carbamazepine requires hepatic and complete blood count monitoring, as it is rarely associated with leucopenia (low white cell count). Side effects for carbamazepine can include cognitive dulling, skin rash (rarely serious), bone marrow suppression, as well as gastrointestinal upset.

Dosing of carbamazepine generally falls in the 400–1600 mg total daily dose range, usually taken twice daily. There is no clear "therapeutic" blood levels for carbamazepine, although most practitioners aim to keep patients in the 4–12 µg/dL range.

Carbamazepine has numerous drug interactions, including many psychotropic medications. Carbamazepine induces the metabolism of lamotrigine, requiring dosing schedules for lamotrigine that are twice what is standard. Carbamazepine also induces the metabolism of all of the atypical antipsychotics, requiring compensatory dose increases as well. Carbamazepine is also known to induce its own metabolism, which sometimes leads to relapse in symptoms a month or two after the onset of therapy, which can be rectified by a compensatory dose increase.

2.2.1.6 Other Antiepileptic Drugs and Mania

Psychiatrists have a somewhat embarrassing history of prescribing AEDs "off-label," in the virtual absence of data, for psychiatric conditions. Unfortunately, patients are rarely informed about recommended medications being "off-label," leading patients to believe that what they are prescribed "works" for their condition. Gabapentin (Neurontin) and topiramate (Topamax) are examples of AEDs used by psychiatrists as "antimanic" agents.

Under rigorous study conditions, off-label AEDs sometimes fail spectacularly. In one large study patients were treated for a mixed, manic, or hypomanic episode with lithium, divalproex, or both, and incomplete responders had gabapentin or placebo added. (Pande, Crockatt, Janney, Werth, & Tsaroucha, 2000). Patients randomized to gabapentin actually had statistically significantly poorer outcomes than those randomized to placebo. While gabapentin does have some anxiolytic qualities, it must not be considered a meaningful antimanic agent.

Topiramate is another such AED used off-label as an antimanic for a number of years. In 2006, one article, describing four RCTs of topiramate in acute mania was published (Kushner et al., 2006). All four studies concluded topiramate as being no better than placebo as an antimanic agent. Two of these studies used an active comparator, lithium, which did perform well, validating the results of the studies. Topiramate does appear to have for some individual anorectic qualities (i.e., acts as an appetite suppressant), and in patients who have experienced weight gain associated with psychotropic medication, topiramate at times can ameliorate this.

Oxcarbazepine (Trileptal) is another AED commonly used for mania or mania prophylaxis, and is considered a legitimate second-line antimanic by the Texas Medication Algorithm Project (TMAP, Suppes et al., 2005), probably due to its chemical similarity to carbamazepine. There is a paucity of data from adequately powered RCTs in support of this position.

2.2.1.7 Atypical or Second-Generation Antipsychotics

The Texas Medication Algorithm Project (TMAP) considers any of the five newer AAPs, with the exception of olanzapine, a reasonable "first-line" treatment for mania. Olanzapine is not recommended as first line due to the potential for causing a very significant amount of weight gain as well as dysregulation in glucose and lipid metabolism. Patients undergoing treatment with any of the AAPs require periodic weight, lipid, and glycemia monitoring, as well as surveillance for involuntary muscle movements (tardive dyskinesia). Clozapine, despite being the first AAP, is not widely used as an antimanic agent, due in part to concerns with potential for agranulocytosis (very low white blood cell count), very poor metabolic profile (worse even than olanzapine), and difficulty with titration.

Risperidone (Risperdal) was the first widely used AAP, and is also the first available as a generic. Risperidone is given as either single or twice daily dose. Effective antimanic dose ranges from 2–6 mg. As risperidone doses get higher, it acts more like a first-generation high-potency antipsychotic such as haloperidol (Haldol), with tremor and muscle stiffness becoming more likely adverse effects. Women especially can be sensitive to risperidone's potential for elevating prolactin levels, and this can lead to galactorhea (formation of breast milk). Advantages to risperidone are cost as well as predictable clinical response.

Olanzapine (Zyprexa) was the second widely used AAP. Dosing of olanzapine is the 5–20 mg/day range, and olanzapine is usually dosed once daily (at bedtime). Olanzapine has a highly

unfavorable metabolic profile, i.e., weight gain, worsening of glucose and lipid metabolism, which has relegated olanzapine to a second-line treatment at this point. Olanzapine is also available as part of a combination drug, with fluoxetine, marketed as Symbyax, which has been FDA-approved for bipolar depression. A recent 25-week extension of a clinical trial comparing lamotrigine to olanzapine in the management of bipolar depression (Brown, et al. 2008) reports that one third of patients randomized to olanzapine/fluoxetine combination experienced at least a 7% of baseline body weight increase, and 37% of patients had a meaningful elevation of triglyceride (associated with coronary artery disease). Only 2.9% of lamotrigine-treated patients had 7% weight gain, and 13.4% elevated triglycerides. Cholesterol was also much more likely to be elevated in olanzapine/fluoxetine-treated patients than in lamotrigine-treated patients, 15.9% versus 3.7%. In this study, treatment-emergent high blood glucose was rare and similar in the two groups.

Quetiapine was the next available AAP, and is becoming quite popular for a number of phases of bipolar disorder. For mania, quetiapine is dosed to 600 mg daily, usually in two divided doses. Quetiapine is also one of two FDA-approved treatments for bipolar depression, but for this indication is dosed at 300 mg daily in a single HS dose. Quetiapine can be quite sedating, which for some patients limits its usefulness. Metabolically, quetiapine is more like risperidone than it is like olanzapine, with moderate weight gain and glucose metabolism abnormalities. Quetiapine is now FDA-approved as a maintenance treatment for bipolar disorder, when used in conjunction with lithium or divalproex.

Ziprasidone has the most favorable metabolic profile of the AAPs, but the fewest data demonstrating efficacy in bipolar disorder. Low doses of ziprasidone can be highly activating for the patient with bipolar disorder. For the treatment of mania, ziprasidone should be started at 40 mg twice daily, and increased to 80 mg twice daily on day two. Absorption of ziprasidone is facilitated by lipid (fat) in the stomach, and as such must be taken after eating. Dystonia (muscle contraction) can be problematic with this agent.

Aripiprazole, besides being approved for mania, is one of the four medications indicated as a bipolar maintenance drug. Lower doses of aripiprazole, like ziprasidone, can be activating, and as such, starting doses in the treatment of mania should be in the 15–30 mg range. Akithesia (restlessness or need to move about) is seen commonly with aripiprazole. Metabolically, aripiprazole appears to fall somewhere between ziprasidone and quetiapine. It is certainly not weight neutral, with 20% of patients gaining >7% of baseline body weight over the course of a 100-week maintenance study. (Keck et al., 2007)

2.2.1.8 Maintenance Treatments

Lithium, lamotrigine, aripirazole, and olanzapine constitute the four FDA-approved monotherapies for bipolar maintenance. In practice, any of the antimanic medications can be considered reasonable maintenance treatments, with the possible exception of ziprasidone which as of yet has incomplete data. Of these maintenance treatments, lamotrigine is the only medication that lacks an indication for any acute treatment. Lamotrigine was hoped to have been a useful treatment for bipolar depression, following one positive study (Calabrese et al., 1999) but four subsequent RCTs (Calabrese et al., 2008) did not replicate this finding.

Lamotrigine was demonstrated to be useful as a maintenance treatment when data were pooled (Goodwin et al., 2004) from two studies, one of lamotrigine in bipolar depression

(Calabrese et al., 2003) and the other enrolling recently manic or hypomanic patients who were placed on lamotrigine (Bowden et al., 2003). Putative responders were then randomized to placebo, lithium, or continuation of lamotrigine. Lithium and lamotrigine were more effective than placebo in time to any mood episode, with lamotrigne having more robust effect-preventing depression and lithium more effect-preventing mania. Lamotrigine should be considered primarily as a treatment for the prevention of depression, and not as a robust mania prophylaxis treatment.

2.2.1.9 Bipolar Depression

There are currently two FDA-approved treatments for MDEs associated with bipolar disorder-bipolar depression. These are quetiapine (Seroquel) and olanzapine/fluoxetine combination (OFC, Symbyax). In addition to these two agents, lithium and lamotrigine are considered "first-line" interventions both by the Texas Medication Algorithm Project (TMAP) as well as the Canadian Network for Mood and Anxiety Treatments (CANMAT) (Yatham et al., 2009). However, lamotrigine did not perform better than placebo in five RCTs for bipolar depression (Calabrese et al., 2008), but when data were combined from these studies in a meta-analysis (Geddes, Calabrese, & Goodwin, 2009), a modest advantage was demonstrated for lamotrigine over placebo, favoring patients with more severe depression at baseline.

The utility and safety (i.e., can antidepressants induce affective switch to mania or hypomania) of standard antidepressants in the treatment of bipolar depression is controversial. Standard antidepressants are considered "first-line" in the CANMAT treatment guidelines, but are considered fourth line by the TMAP. We believe the new American Psychiatric Association treatment guidelines for bipolar depression will not recommend standard antidepressants. There is a general consensus that standard antidepressants should not be used alone (i.e., in the absence of a concurrent antimanic agent, either a traditional mood stabilizer such as lithium, valproate, or carbamazepine, or an atypical antipsychotic).

Evidence refuting the effectiveness of standard antidepressants in the treatment of bipolar depression is accumulating. Nemeroff et al. (2001) compared imipramine (a tricyclic antidepressant), paroxetine, and placebo in bipolar patients already maintained on lithium, finding no advantage for patients treated with antidepressant. Sachs et al. (2007), in a sub-study in the Sequenced Treatment Enhancement Program for Bipolar Disorder (STEP-BD), randomized approximately 180 patients on an antimanic agent with bipolar depression to paroxetine or bupropion and a similar number to placebo. Durable recovery, that is, 8 weeks of euthymia, was achieved by 27.3% of patients on placebo, as compared to 23.5% on antidepressant ($p = 0.4$). Rates of treatment-emergent affective switching were similar across both groups.

The disparity of opinion as to the risks and benefits from antidepressant therapy in bipolar depression may stem somewhat from the time frame which one is examining. A number of 8–12-week studies of antidepressant have found them to be effective in bipolar depression (Gijsman, Gedded, Rendell, Nolen, & Goodwin, 2004) but none of these studies use the Sachs "durable recovery" of 8 weeks of euthymia as end point. Regarding safety, 8–12 weeks may not be long enough for the detection of rapid-cycling induction, or to detect increased risk of mania or hypomania. Ghaemi, Wingo, Fikowski, & Beldessarini (2008) performed a meta-analysis of antidepressant studies of at least 6 months. They report that when compared to mood stabilizer alone, the number needed to treat with antidepressant to protect from a new

episode of bipolar depression was 16, as was the number needed to harm by inducing a manic or hypomanic episode with ongoing treatment with standard antidepressant.

2.2.1.10 Evidence-Based Treatment Approaches

In this section, we will describe and evaluate outcomes data for three manual-driven psycho-therapies for bipolar disorder.

Family-focused therapy (FFT), cognitive therapy (CT) and interpersonal social rhythms therapy (IPSRT) constitute the three manual-based psychosocial interventions with random-ized-controlled trial (RCT) outcome data currently used in the management of people with bipolar disorder. Data are limited in support of these interventions, and will be reviewed below.

All three manual-based psychosocial interventions were studied in a large RCT under the umbrella of the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD) program. STEP-BD was a 5-year, multicenter NIMH-funded study that enrolled more than 4,000 patients with bipolar disorder, and was meant to assess interventions and outcomes in the "real-world" settings. Patients suffering an episode of depression were encouraged to enter a sub-study, comparing placebo to paroxetine or bupropion, and these patients were then eligible for the additional psychosocial intervention in STEP-BD. Toward the end of recruiting, the requirement to participate in the medication portion of the depression study was waived. Outcomes for each psychosocial intervention will be reviewed when discussing that specific intervention. Globally, intensive psychotherapy performed better that the control condition (three sessions of psychoeducation). (Milkowitz et al., 2007), but did not significantly differ from one another.

Each of these interventions has been studied in patients concurrently being treated with optimized bipolar disorder medications, i.e., they are not at this point recommended as "stand alone" interventions. Many of the patients enrolled in these RCTs had been recently hospitalized, and most frequently the index episode was depression.

2.2.1.11 IPSRT

IPSRT was developed by Frank (2007) based on the belief that individuals with bipolar disor-der have circadian rhythms that are particularly sensitive to perturbations of daily routines, such as sleep/wake cycle, timing of work, timing of meals, etc., and such disruptions can induce relapse in affective symptoms.

IPSRT targets three paths thought to lead to relapse in bipolar patients: medication non-compliance, stressful life events, and disrupted social rhythms. IPSRT is delivered in four phases, and generally is provided in roughly 20 sessions. In the initial phase of treatment, last-ing 3–5 sessions, a thorough history is taken of mood episodes stressing their relationship to disrupted social routines and interpersonal problems (akin to some aspects of motivational interviewing). Education about bipolar disorder is provided to patient and family when appli-cable. An assessment of interpersonal relationships is obtained. Social routines are assessed using the social rhythm metric. This social rhythm metric resembles in some ways a daily plan-ner and is used to record such activities as waking, going to bed, eating, and social contact. Finally a target for interpersonal therapy (IPT) is selected (i.e., role transition, role disputes,

interpersonal deficits, grief). The continuation phase of IPSRT seeks to reinforce regular social rhythms as well as to continue to progress toward IPT target goals. In the continuation phase, frequency of sessions is reduced from weekly to semi-weekly or monthly. The final phase of IPSRT is to prepare for termination. Skills and routines are reinforced. Sessions are made more infrequent (monthly or less). While absolute termination is not necessary, frequently financial concerns or relocation can make this necessary.

IPSRT performed equivalently to CT and FFT is the study of intensive psychosocial interventions in the STEP-BD treatment of bipolar depression (Milkowitz et al., 2007) as defined by time to recovery and 1-year recovered status. These data are difficult to interpret, as when correcting for family availability, the proportion at 1-year assigned IPSRT (17/30, 56.7%) was no better that those assigned the control condition (37/64, 57.8%).

A second large study compared IPSRT to a nonspecific control condition (Intensive Clinical Management (ICM)) consisting of education about bipolar disorder, medication, sleep hygiene, and careful monitoring of symptoms and side effects (Frank et al., 2005). Patients could be enrolled in any state of illness (depression, mania, mixed). All patients were managed also with manual-driven pharmacotherapy. This study had four cells, with IPSRT and ICM being options for acute phase treatment, as well as options for maintenance phase treatment (i.e., patients were randomized to ICM/ICM, ICM/IPSRT, IPSRT/IPSRT, or IPSRT/ICM). Time to remission and proportion achieving remission were similar for ICM and IPSRT, after controlling for variables such as polarity of index episode, marital status, age, and gender. However, time to recurrence in the maintenance phase favored patients assigned IPSRT acutely ($p = .04$). Assignment in the maintenance phase made no difference in survival time. Patients with high medical burden and those patients with anxiety disorders fared better when assigned ICM.

2.2.1.12 Family-Focused Therapy (FFT)

FFT was developed originally for individuals with schizophrenia and their families and is based on the concept of highly expressed emotion (EE). High EE can be irritability, criticism, anger, or over-involvement, and pertains to the family member's interactions with the patient. In theory, when a person with bipolar disorder (or schizophrenia) interacts with a close family member who has high EE, that rekindles reciprocal emotion in the patient, and this excess of negative emotion is thought to increase vulnerability to relapse.

FFT can include different "family," (i.e., spouses, children, parents, and can even include close friends over the course of treatment). It is delivered in 21 sessions covering 9 months. Not all family members must attend all FFT sessions. Frequency of visits starts as weekly, then is reduced to semi-weekly, then monthly. FFT is delivered in three modules.

At the outset of FFT, patients and their families are educated about bipolar disorder, including symptoms, course, need for medication, as well as stress management. Patients and families identify historic behaviors or situations thought to exacerbate affective relapse. Relapse recognition, the ability to recognize prodromal symptoms of an incipient mood episode, is explored, and patient and family are encouraged to document steps that they will take in such an eventuality.

Communication Enhancement Training (CET) is the focus, beginning at approximately session eight, and continuing for up to ten sessions, of module two. Patients and families are educated about communication styles that can diffuse negative emotion and affect.

The therapist can model and coach both family members and the patients in communication techniques such as active listening, how to make positive requests for change in another's behavior, and how to clearly communicate both positive and negative information to other family members. Families are asked to practice between sessions.

Problem-solving skills training is the focus of module three. Families are asked to identify a target problem, assess potential risks and benefits of proposed solutions, and agree to a strategy and a plan. Less-imposing issues are addressed first, with the hope of mastery experiences facilitating future successes. The final sessions review achievements and facilitate termination.

FFT has performed well in RCTs, although data remain few. The first RCT of FFT in bipolar disorder (Milkowitz, George, Richards, Simoneau, & Suddath, 2003) randomized 70 patients to crisis management (CM), consisting of two 1 h sessions focusing on education, monthly telephone calls, and as-needed crisis sessions. Thirty-one patients were randomized to FFT, consisting of 21 sessions. Survival curves favored the FFT intervention. Interpretation of these results is difficult, as FFT-randomized patients had so much more treatment contact than CM-assigned patients. A smaller RCT (53 total patients) (Rea et al., 2003) compared FFT to an identical number of individual supportive, educational sessions, albeit 30 min in length versus 60 min for FFT. Relapse rates at 1 year did not differ significantly, but at 2 years favored FFT. In the STEP-BD RCT of intensive psychosocial interventions for bipolar depression, patients assigned FFT had a 1-year recovery rate of 77% compared to the control condition recovery rate of 51.5%.

2.2.1.13 CT

CT, originally developed by Beck (Beck, 1979) for the treatment of unipolar depression, has been adapted as a treatment for bipolar disorder. Central to CT is the belief that thought, behavior, and mood are interdependent. While original elements of CT- identifying and modifying maladaptive thinking and behavior remain, certain bipolar disorder-specific elements have been added (Lam, Jones, Bright, & Hayward, 1999). Patients are educated about the stress-diathesis model of bipolar disorder and the need for stress management as well as pharmacotherapy. CT for bipolar disorder also stresses the importance of regulating the sleep cycle as well as levels of daytime activity seeking to prevent over- or understimulation. Patients are educated about signs of relapse (prodrome) and methods to prevent full-blown syndromic relapse. Finally, Lam in particular targets "overcompensation" for time lost to illness, hoping to prevent excessive striving for achievement, which may lead to elevated mood state, or conversely, depression if these efforts are unsuccessful.

Effectiveness data from RCTs of CT for bipolar disorder are equivocal. Scott et al. randomized 253 bipolar patients to treatment as usual (TAU) or CT in a 1:1 ratio. They excluded rapid cyclers and people with severe BPD. Patients received 20 sessions or CT and those randomized to TAU followed up with mental health professionals on an as-needed basis, unconstrained. There was no difference in outcomes between the two groups in rate or severity of recurrence or in medication compliance. Patients with 12 or fewer lifetime mood episodes fared better with CBT, suggesting this may be better utilized early in the course of treatment.(Scott et al., 2006).

Lam et al. (2003) randomized 103 patients with bipolar 1 disorder to CT or TAU. Patients randomized to CT were significantly less likely to have relapsed by 12 months – 28.3% versus

50% (p = .001) Patients assigned CT also had significantly fewer days of depression or manic over 12 months. A 30-month follow up to this study (Lam, Hayward, Watkins, Wright, & Sham, 2005) concluded that CT had no effect on relapse reduction in the last 18 months of the study.

In the STEP-BD study of bipolar depression, CT recovery rates were 60% as compared to 51.5% in the control group. When controlling for the availability of a family member (a positive predictor of recovery), CT recovery rates were 59% versus 57.8% for the control condition.

2.2.1.14 Basic Competencies of the Clinician

We will consider differential diagnosis, psychoeducation, and collaboration with the prescribing physician to be the basic competencies of the clinician.

2.2.1.15 Differential Diagnosis

Errors in making the diagnosis of bipolar disorder can be both of omission (i.e., missing the diagnosis) or commission (i.e., diagnosing bipolar disorder when it is not present). Both types of errors are frequently made, leading in many cases, to treatments that will not be helpful (errors of omission will lead to nonbipolar-specific treatment) or subjecting patients to the morbidity of bipolar-specific medication unnecessarily (errors of commission). Furthermore, erroneously diagnosing bipolar disorder in a person without bipolar disorder will usually preclude the institution of a more effective therapy, such as treating a person with BPD with a mood stabilizer rather than with dialectic behavior therapy.

A frequent diagnostic error of omission – missing the diagnosis of bipolar disorder – occurs when a person presents with symptoms consistent with a MDE. Unfortunately, the diagnostic criteria for an MDE are identical whether the episode is part of MDD or bipolar disorder. The key to diagnosing bipolar disorder in a person with a MDE is eliciting a history of manic or hypomanic episodes. Elevated mood episodes are often missed in retrospect when irritability is more prominent than euphoria or feelings of well-being. A collateral informant (spouse, parent, etc.) can often offer insight into periods of abnormal mood not necessarily considered pathologic by the patient. Many times a patient will endorse periods of elevated mood in the past, that under closer scrutiny are simply nonpathologic reactions to favorable life events. Associated features, such as rapid or pressured speech, decreased need for sleep, impulsivity in potentially harmful areas need to be explored to accurately diagnose historic episodes of mania or hypomania.

While criteria for a MDE are identical for MDD and bipolar disorder, there are some clinical characteristics in patients that can help guide the practitioner in differentiating between unipolar depression and bipolar depression. A large study in Great Britain compared 443 patients with bipolar 1 disorder to 593 patients with MDD (Forty et al., 2008). Patients with bipolar depression were more likely to have diurnal variation (consistent mood fluctuation within each day), a higher number of lifetime MDEs, shorter duration of MDEs, hypersomnia (excessive sleep), and a history of psychosis. In Canada, McIntyre, Soczynska, Konarski, & Kennedy reviewed charts of 1,000 patients in a specialty mood disorders clinic (McIntyre et al.,

2007) seeking to find ways to distinguish bipolar from unipolar depression. Patients with bipolar disorder were more likely to have been hospitalized, had earlier age of onset, more numerous lifetime MDEs, were more likely to have substance use disorders, and were less likely to be employed. Of note, 16% of these patients had been misdiagnosed with MDD when in fact they were found to have bipolar disorder. Finally, a large outpatient study compared clinical characteristics and history of 126 unipolar and 187 bipolar 2 patients (Benazzi, 2003). Bipolar depression was more likely to have atypical features (hypersomnia, hyperphagia) (49.7% versus 18.2%), earlier age of onset (mean 21 years versus 29.5 years), family history of bipolar 2 disorder (54.2% versus 9.8%), and family history of bipolar 1 (10.8% versus 4.9%). Psychosis was less common (7.4% versus 10.3%) in bipolar 2 disorder than MDD.

Another potentially troublesome differential diagnosis can occur in patients with a history of psychosis. Until the advent of lithium in the 1970s, most individuals when presenting with psychosis were diagnosed as having schizophrenia. This has changed dramatically in the last 20 years. A review of discharge records of patients admitted with psychosis to six psychiatric teaching hospitals (Stoll et al., 1993) from 1972–1991, reveals a threefold decrease in schizophrenia diagnosis, coincident with a fourfold increase in affective disorder diagnosis – that is unipolar depression and bipolar disorder. In the USA, African-Americans continue to be disproportionately diagnosed with schizophrenia (Strakowski et al., 2003) when compared to whites, rather than bipolar disorder. Clearly, elucidating significant affective symptoms, especially coincident with psychotic symptoms, will differentiate schizophrenia from bipolar disorder. A patient with significantly reduced need for sleep when psychotic should alert any diagnostician to strongly consider bipolar 1 disorder.

Duration of impairment is another way to differentiate schizophrenia from bipolar disorder, with "continuous signs of disturbance persist for at least 6 months" (American Psychiatric Association, 1994, p. 285) necessary for a diagnosis of schizophrenia. Social and occupational functions tend to be more insidiously and chronically affected by schizophrenia than bipolar disorder, as described by Criterion B of schizophrenia.

▶ For a significant portion of the time since the onset of the disturbance, one or more major areas of functioning such as work, interpersonal relations, or self-care are markedly below the level achieved prior to the onset.(American Psychiatric Association, p. 285)

A diagnostic category, schizoaffective disorder is reserved for patients who have had a manic, depressive, or mixed episode during a period of "uninterrupted illness" (American Psychiatric Association, p. 295) and also meet criterion A for schizophrenia – criterion A being 2 or more of the following: delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behavior, negative symptoms. In schizoaffective disorder the delusions or hallucinations must be present in the absence of affective symptoms, and the affective symptoms are present for a substantial portion of the episode. If delusions and hallucinations are present only during affective episodes, a diagnosis of bipolar 1 or MDD (with psychotic features) is made.

Differentiating bipolar disorder from BPD can also be challenging, as these disorders can share some similar symptoms, including impulsivity, affective instability, intense irritability, and suicidal behavior. These disorders are not exclusive; that is, both can co-occur in the same individual. Several diagnostic criteria are specific to BPD, however, and can be helpful in differentiating the two conditions. People with BPD can display "frantic efforts to avoid real or imagined abandonment," as well as have a pattern of unstable personal relationships (nonspecific to borderline personality) "characterized by alternating extremes of idealization

and devaluation"(much more specific for borderline personality). Another area that can differentiate borderline personality from bipolarity is in the duration of the affective instability, with bipolar affective episodes usually lasting much longer than affective episodes found in borderline personality episodes. As described in criteria number 6 of the DSM-IV for borderline personality, "affective instability due to a marked reactivity of mood" (e.g., intense episodic dysphoria, irritability, or anxiety, usually lasting a few hours and only rarely lasting more than a few days). This mood reactivity is in response to environmental triggers, usually interpersonal ones, which is not seen so typically in bipolar disorder. Finally, "transient, stress-related paranoid ideation or severe dissociative symptoms" is one of the nine diagnostic criteria of borderline personality; dissociation is rarely seen in bipolar disorder. Diagnositic errors of omission, missing bipolarity in a person believed to have BPD, as well as commission, diagnosing bipolarity in a person with only borderline personality, are frequently made.

Diagnosis of bipolar disorder in a person with a significant history of substance abuse or dependence can be particularly challenging, especially if a stimulant such as cocaine or amphetamine is involved. This can lead to a diagnostic error of commission, i.e., diagnosing bipolar disorder where it does not exist. Individuals with substance use disorders can display and report unstable mood – depression, irritability, anger, as well as impulsivity in the context of ongoing substance use. Stimulant drugs can lead to symptoms identical to mania – decreased need for sleep, grandiosity, auditory hallucinations or paranoia, and irritability. The golden standard (outside of observing manic symptoms in a patient in a controlled environment with no access to substances) lies in reviewing with the patient manic or hypomanic episodes during periods of abstinence from substances, when possible. A review of 85 patients admitted to a dual-diagnosis psychiatric unit in the USA (Goldberg et al., 2008) and diagnosed with bipolar disorder, revealed only 33% actually meeting DSM-IV criteria for bipolar 1 or bipolar 2 disorder. The majority of these people who failed to meet diagnostic criteria were due to insufficient symptoms of mania or hypomania (i.e., racing thought, grandiosity, flight of ideas) during their period of "mood elevation." More than one third of this population also did not have periods of abstinence of sufficient duration to identify manic symptoms independent of substance use.

2.2.1.16 Psychoeducation

A primary function of a therapist when working with a person with bipolar disorder is that of psychoeducation (❯Table 2.3). Psychoeducation, when delivered in a group setting, has been shown to delay time to affective relapse (Colom et al., 2003, 2009), when compared to a control nonspecific group intervention. Psychoeducation seeks to inform the patient as to the cyclical, recurrent nature of bipolar disorder and stresses the benefits of adherence to medication recommendations. Psychoeducation reinforces to the patient the biologic basis of bipolar disorder and helps ameliorate shame related to behaviors influenced by mood episodes. Patients are taught that bipolar disorder is a chronic condition, similar in some ways to diabetes and hypertension that requires lifestyle changes, as well as frequent monitoring and consistency in medication compliance. Consequences of affective episodes are explored, seeking to bolster the motivation of the individual to remain in treatment. Psychoeducation appears to be most useful when delivered to a more euthymic patient.

◘ **Table 2.3**

Elements of psychoeducation (Barcelona Bipolar Disorders Program) (Colom et al., 2003, with permission)

1. Introduction
2. What is bipolar illness?
3. Causal and triggering factors
4. Symptoms (1): mania and hypomania
5. Symptoms (2): depression and mixed episodes
6. Course and outcome
7. Treatment (1): mood stabilizers
8. Treatment (2): antimanic agents
9. Treatment (3): antidepressants
10. Serum levels: lithium, carbamazepine, and valproate
11. Pregnancy and genetic counseling
12. Psychopharmacology versus alternative therapies
13. Risks associated with treatment withdrawal
14. Alcohol and street drugs: risk in bipolar disorder
15. Early detection of manic and hypomanic episodes
16. Early detection of depressive and mixed episodes
17. What to do when a new phase is detected
18. Regularity
19. Stress management techniques
20. Problem-solving techniques
21. Final session

Psychoeducation for bipolar disorder can be thought to encompass four main topics – the first being broad education about bipolar disorder. This includes symptoms of mania/hypomania, depression, and mixed states. The clinical course of bipolar disorder is presented, as well as factors associated with relapse. In this phase of treatment, patients can be helped to adjust to life with a chronic illness. Patients may need to grieve the loss of their "well" self. Some patients may be relieved that there is a biologic basis that has driven much of the chaotic interpersonal or professional decisions made in the past. The second main theme includes pharmacologic treatments for the disorder. Standard mood stabilizers, antidepressants, a typical antipsychotics, benzodiazepines can all be discussed. Patients can identify what is beneficial as well as problematic about somatic treatments they have experienced, including active treatments. Expectations as to outcomes with medication compliance can be explored and adjusted. The third main theme addresses identification of relapse – both elevated and depressed mood, as well as relapse management strategies. Regularity in daily routines is stressed (a theme common to all psychosocial treatments for bipolar disorder) as well as the association of substance abuse and relapse. The final section can include stress management and problem-solving skills, and depending on the ability of the patient to internalize such material, it can be time-limited or not. Patients may continue to require boosters targeting any of

the previously covered material, and may continually struggle with ambivalence toward pharmacologic management.

Commonly the individual providing psychoeducation or any of the psychosocial interventions is not the person prescribing medications to the patient with bipolar disorder. An open line of communication is essential between these two providers, as issues with medication may be discussed with the therapist that the patient may choose not to discuss with the prescriber. Conversely, the prescribing clinician may identify issues that would be amenable to psychotherapeutic intervention, but time limitations may preclude immediate attention from the prescriber.

Of additional benefit to the person with bipolar disorder is open communication between family members, significant others, and the therapist. These individuals can be in a position to first detect signs of relapse, and alert members of the treatment team. Frequently, patients with bipolar disorder lack insight, or symptoms may impair judgment, leading to not reporting signs of relapse in standard sessions. A collateral informant is in the unique position of knowing the patient, knowing signs of relapse, and being present to a degree that they are often the first to detect relapse in the bipolar patient.

2.3   Expert Competence

To our knowledge, there are no formal guidelines or processes that would lead to explicit recognition as an expert practitioner in the areas of assessment or treatment of bipolar affective disorder. We therefore review in the following paragraphs some suggested guidelines to establish expertise in the most important areas of practice for a clinical psychologist. To this end, we cannot underscore enough that mastery of the requisite skills requires clinical exposure to a wide range of individuals of bipolar affective disorder in both ambulatory and hospital-based care settings and appropriate supervision that far surpasses the standards for licensure and clinical accreditation.

2.3.1   Diagnosis

We consider being able to make a correct diagnosis of the type I, type II, and NOS forms of bipolar affective disorder according to DSM-IV TR criteria and to be able to make an informed differential diagnosis between bipolar affective disorder and the most common alternate diagnoses (i.e., recurrent MDD, schizophrenia, schizoaffective disorder, BPD, and mood disorders related to various substance misuse disorders) to be a core competence. The expert practitioner should be able to help clarify the diagnoses of individuals with more complex and challenging conditions and, when certain points of differential diagnosis cannot be resolved based on available information, should be able to outline a plan that will lead to collecting the necessary information. This includes willingness to interview loved ones and significant others and have the wisdom to contact past care providers and review prior records.

Although standardized instruments such as the Structured Clinical Interview for Diagnosis (SCID) of DSM-IV TR Mental Disorders are not used in day-to-day clinical settings, we would suggest that the expert practitioner obtain training and certification in the use of this interview

and remain current with the changes in the nomenclature and diagnostic criteria that inevitably will follow (e.g., DSM-V and subsequent editions). If sufficient supervisory expertise is not available during training, the motivated learner may wish to follow the suggested training program developed by the faculty and staff of the Biometrics Research Department of the New York State Psychiatric Institute (http://cpmcnet.columbia.edu/dept/scid/training/overview.html), which is affiliated with the Columbia University College of Physicians and Surgeons. This training program includes an 11 h, eight DVD series, known as SCID 101, as well as a suggested stepwise program for establishing diagnostic reliability. Importantly, experienced diagnosticians will be able to sort out the endemic problems with comorbidities (i.e., a majority of individuals with bipolar disorder will meet DSM-IV criteria for at least one other Axis I or Axis II disorder). We suggest that the true expert has sufficient mastery of the SCID to serve as a local or regional trainer for the next generation of interviewers.

In many care settings even the most skilled interviewer will encounter people seeking treatment for episodic, fluctuating, or chronic mood disorders that present with a challenging admixture of behavioral and temperamental characteristics seem to suggest that the proper diagnosis is not simply a MDD, but which fall well below the threshold for a formal diagnosis of bipolar 1 or bipolar 2 disorder. Some clinicians tend to view these conditions within a broader transitional grouping, referred to as bipolar spectrum disorders; in DSM-IV TR most of these individuals would be classified as having a bipolar disorder NOS. In recent years, a self-report measure known as the mood disorder questionnaire (MDQ; Hirschfeld, 2002) has been increasingly used as a screening tool for bipolarity; like other screening tools, this scale is strong on sensitivity (i.e., most people with bipolar disorder have high MDQ scores), at the expense of limited specificity (i.e., about 50% of people who score high on the MDQ do not meet SCID criteria for bipolar 1 or bipolar 2 disorder).

The past decade has witnessed introduction of a large number of newer therapies for bipolar disorder and, as inevitably happens, more therapeutic options are associated with an increased "recognition" of the disorder. The expert practitioner has the wisdom to view the term bipolar spectrum as a potentially useful heuristic, with the perspective to understand that any decision to approach treatment as if the individual had a confirmed diagnosis of bipolar disorder was akin to hypothesis testing. As recently reported by Zimmerman, Ruggero, Chelminski, & Young (2008), a fairly large proportion of people presenting for treatment with a "known" diagnosis of bipolar disorder actually do not meet full DSM-IV criteria on the basis of a SCID interview.

2.3.2   Assessment

Beyond expertise in using the SCID and making an accurate diagnosis, an expert practitioner should be a reliable rater of disease state severity with standardized rating scales. With respect to the depressive pole of the illness, the Hamilton Rating Scale for Depression (HAM-D; Hamilton, 1960) and the Montgomery-Asberg Depression Rating Scale (MADRS; Montgomery & Asberg, 1979) are the most commonly used in research studies, though the Inventory of Depressive Symptomatology (IDS; Rush et al., 1986) has the added advantage of being also available in self-report and abbreviated or "quick" versions. A number of scales are likewise used to rate the severity of mania, with the Young Mania Rating Scale (YMRS; Young, Biggs, Ziegler, & Meyer, 1978) currently having the broadest use in treatment research.

Other more specialized areas of assessment in bipolar disorder include personality (i.e., DSM-IV TR Axis II) and neuropsychological and neurocognitive performance. Expertise in these areas goes far beyond mastery of a particular interview or test protocol, but instead is based on recognition when it is most productive and valid to administer such measures and when and how the data should be interpreted. Specifically, both Axis II assessments and neuropsychological test performance are highly state-dependent. Depressive states – even subsyndromal ones – tend to be associated with greater endorsement of Cluster C traits and psychomotor slowing and decreased effortful processing. Conversely, hypomania and mania are associated with greater endorsement of Cluster B traits and greater impulsivity on cognitive tasks.

2.3.3   Treatment

We believe that a clinical psychologist with established expertise in bipolar disorder should have a working knowledge of the major classes of medications used to treat bipolar disorder, as well as the common side effects associated with these medications. Although it would not be the psychologist's job to actually manage these medications, it is possible that the psychologist will be seeing the treated individual more frequently than the prescribing physician and, as such, may be the first health care provider to recognize when a treatment is having an intolerable side effect or some other untoward effect. An expert practitioner would not only be able to recognize such problems, but also be able to facilitate addressing the problem in a timely manner, without inadvertently fostering a split in the triadic therapeutic alliance. This includes the clinical judgment to know when it is best to contact the physician immediately (with, of course, the client/patient's consent) and when it is best to encourage their client/patient to make the call themselves. Clinical sophistication also is needed to avoid falling into the trap of harboring "secret" information about the individual's dissatisfaction with treatment.

Expertise in psychotherapy of bipolar disorder should begin with being able to provide accurate psychoeducation about the illness and its treatment, including comfort and familiarity with discussing medication adherence. As many individuals with bipolar disorder make unilateral decisions to stop their medications at some point, the expert practitioner should be comfortable openly talking about the reasons for and against medication adherence and be able to elicit negative thoughts and feelings about the diagnosis and psychotropic medications, both more generally and more specifically. As there is an increasing evidence that both group and individual models of psychoeducation can significantly improve the outcomes of individuals with bipolar disorder (Colom & Lam, 2005), we suggest that one standard for expertise within a clinical care setting such as a mental health clinic would be to implement and oversee such activities and monitor outcomes.

Finally, although we do not believe that, at this time, it is an essential standard for the expert practitioner to master one of the empirically supported individual or group psychotherapies for bipolar disorder, we do believe that the evidence base for these therapies is growing such that it would be wise to seek training and ongoing supervision in FFT, cognitive behavior therapy (CBT), or IPSRT for bipolar disorder. For individuals who have not been exposed to one or more of these therapies during training, the following plan is recommended: buy (and read) the book and attend a 1- or 2-day long training workshop conducted at the

annual meetings of the American Psychological Association, the American Psychiatric Association, or the Association for Behavioral and Cognitive Therapies. Typically, criteria for minimum clinical competence require at least two supervised cases; generally, at least several years (and some requisite number of cases) are necessary before one has sufficient mastery to teach and train.

2.4   Summary

Bipolar disorder is a commonly recurrent psychiatric illness that is frequently diagnosed, yet at times difficult to diagnose accurately. People with bipolar disorder have high rates of comorbid substance use disorders, anxiety disorders, and personality disorders, making this a challenging population with which to work. Some people with bipolar disorder have excellent interepisode functioning, which can make this also a rewarding population for the clinician.

Pharmacotherapy remains a mainstay to successful management of bipolar disorder, but psychotherapy appears to offer added benefit. Common in all of the psychosocial interventions for bipolar disorder is stressing regularity in sleep/wake cycle, reduction or elimination of substance use, medication adherence, and relapse prevention. Approaches adapted from unipolar depression (IPT, CBT) and schizophrenia (FFT) can be added seeking to modify interpersonal stress, maladaptive cognitions and behaviors, and decrease high EE in the family unit, with the hope of reducing affective relapse that is so prevalent in this population.

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3 Specific Phobia

Josh M. Cisler · Jeffrey M. Lohr · Craig N. Sawchuk · Bunmi O. Olatunji

Abstract: This chapter summarizes basic and expert clinical competencies in specific phobia. Familiarity with diagnostic nomenclature and use of behavioral approach tasks facilitate accurate assessment of specific phobia. The clinician should be familiar with basic processes maintaining specific phobia, such as the use of safety behaviors. Knowledge of exposure-based intervention protocols is mandatory. Expert clinical competencies include knowledge of procedures to augment exposure-based interventions as well and cultural influences in specific phobia. Mobilization of non-specific factors, conducting therapy outside of the consultation room, and collaborative problem solving with the client may facilitate the transition from basic to expert clinical competencies.

3.1 Overview

Specific phobia is one of the most common psychological disorders with a 12-month prevalence rate of 9% (Kessler, Chiu, Demler, & Walters, 2005). It is characterized by excessive fear and/or avoidance of circumscribed objects/situations (American Psychiatric Association [APA], 2000). The circumscribed nature of fear in specific phobia facilitates controlled laboratory experiments; thus, specific phobia has been widely utilized in the past 4 decades to study the basic processes of fear and anxiety. Indeed, McNally (2007, p. 751) makes the following remark during a review of mechanisms of change in exposure therapy: "Many … analogue studies concerned fears of snakes in college students, prompting one wag to quip years later about the Great Snake Phobia Epidemic that had swept through American psychology departments during the 1960s and 1970s." The extensive research utilizing specific phobia has consequently resulted in a wealth of knowledge about the assessment, maintenance, and treatment of specific phobia. It is no surprise that specific phobia has been described as "one of the best-understood psychological disorders" (Antony & Barlow, 2002; p. 380). This chapter outlines the vast specific phobia literature for the purpose of facilitating the development of basic and expert clinical competencies in specific phobia. The following is a brief overview of the chapter.

3.1.1 Assessment

The clinician should first be familiar with the diagnostic nomenclature and criteria for specific phobia. Structured clinical interviews can assist in minimizing false positives and negatives. Behavioral assessment, including behavioral approach tasks, is a useful clinical tool in assessing specific phobia as well as tracking treatment progress. Numerous self-report measures exist and can also assist in assessing the presence of symptoms.

3.1.2 Maintenance

Cognitive factors have received increased empirical support as maintenance factors for anxiety disorders in general and specific phobia in particular. Attentional biases refer to hypervigilance for threat-related stimuli, which increase awareness of sources of danger and can consequently maintain levels of fear by reinforcing phobic beliefs (e.g., spiders really are everywhere). A tendency to overestimate negative outcomes with phobic stimuli similarly serves as a maintenance factor for phobias. Spider phobia and blood-injection-injury (BII) phobia have been linked with disgust, and heightened disgust responses toward these stimuli may potentiate fear. Safety behaviors refer to behaviors an individual performs to prevent feared outcomes. Safety behaviors may maintain fear by preventing exposure to corrective information and attributing nonoccurrence of the feared outcome to performance of the safety behavior.

3.1.3 Evidence-Based Treatment

Exposure has been widely accepted as the treatment of choice for specific phobia. Exposure may entail in vivo exposure or imaginal exposure to the feared objects/situations. Exposure has demonstrated superior efficacy compared to wait-list control groups, nonspecific factor control groups, and alternative credible treatments. Accordingly, exposure is a specific active treatment component for specific phobia. One session of prolonged exposure has been shown to be as effective as five sessions.

3.1.4 Mechanisms of Change in Exposure

Emotional processing theory (EPT; Foa & Kozak, 1986) posits that exposure reduces fear through exposing the individuals to information that is incompatible with their fear structure. For example, individuals may believe that they will asphyxiate in enclosed places. Exposing individuals to those feared outcomes and allowing the individuals to learn that the feared outcomes do not occur weaken the fear response. Contemporary research on mechanisms of change in exposure similarly emphasizes ways to bolster the inhibition of fear responses, such as performing exposure in multiple contexts.

3.1.5 Basic Clinical Competencies

The basic clinical competencies for specific phobia should include knowledge of the basic information about specific phobia and emotions in order to educate the client about the problem. The clinician should be familiar with procedures to assess specific phobia and track changes in symptoms throughout treatment. Familiarity with how to conduct exposure protocols is mandatory.

3.1.6 Expert Clinical Competencies

Expert clinical competencies in specific phobia include knowledge of the procedures to augment the efficacy of exposure. Psychological procedures that potentiate exposure efficacy

include conducting exposure in multiple contexts and preventing the use of safety behaviors during exposure. Pharmacological procedures include the use of D-cycloserine, a partial N-methyl-D-aspartate agonist, that has been found to bolster extinction learning. Finally, expert clinical competencies include appreciation for cultural issues that may affect the presentation and maintenance of specific phobia.

3.1.7 Developmental Trajectory

Several principles may help a clinician develop expert clinical competencies in specific phobia. These principles include mobilizing the nonspecific treatment factors, mapping the structure of the client's fear in order to help elucidate the content and organization of the subjective experience of the client, identifying signals of danger and safety for the client, conducting exposure outside of the consultation room, and using collaborative problem-solving skills with the client to treat the phobia.

3.2 Assessment of Specific Phobia

3.2.1 Diagnostic Criteria

The Diagnostic and Statistical Manual of Mental Disorders, fourth edition text revision (DSM-IV TR; APA, 2000) outlines the following diagnostic criteria for specific phobias:

(A) Marked and persistent fear that is excessive or unreasonable cued by the presence or anticipation of a specific object or situation.
(B) Exposure to the phobic stimulus almost invariably provokes an immediate anxiety response, which may take the form of a situationally bound or situationally predisposed panic attack. In children, the anxiety may be expressed by crying, tantrums, freezing, or clinging.
(C) The person recognizes that the fear is excessive or unreasonable. In children, this feature may be absent.
(D) The phobic situation(s) is avoided or else is endured with intense anxiety or distress.
(E) Avoidance, anxious anticipation, or distress in the feared situation(s) interferes significantly with the person's normal routine, occupational (or academic) functioning, or social activities or relationships, or there is a marked distress about having the phobia.
(F) In individuals under age 18 years, the duration is at least 6 months.
(G) Anxiety, panic attacks, or phobic avoidance associated with the specific object or situation is not better accounted for by another mental disorder.

Clinicians are also encouraged to specify the phobia subtype based on one of the following categories: animal, such as dogs, snakes, and insects; situational, including driving, flying, and enclosed spaces; natural environment, such as storms, heights, and dark; BII, including injections, blood draws, and medical procedures; and, other, which encompasses a broad range of potential phobic stimuli, such as choking, vomiting, and clowns. The BII subtype is unique from other phobia subtypes due to a history of fainting or partial fainting episodes in approximately 80% of cases (Öst, 1992). Furthermore, many patients report disgust or aversion, rather than fear, upon exposure to phobic-relevant cues (Olatunji & Sawchuk, 2005). While fainting

symptoms and disgust are not necessary to establish a diagnosis of BII phobia, they do need to be routinely evaluated as they can serve significant roles in phobic avoidance, functional impairments, and treatment planning.

3.2.2 Clinical Interview

Several well-validated, structured clinical interviews exist that can assist in the thorough evaluation of specific phobias and their associated comorbidities. The Anxiety Disorders Interview Schedule for DSM-IV (Brown, Di Nardo, & Barlow, 1994) and the Structured Clinical Interview for DSM-IV (First, Spitzer, Gibbon, & Williams, 1996) have received the most empirical support, and are routinely used in clinical trial research. Beyond structured clinical interviews, the following questions during an initial evaluation can assist in the recognition of phobic cues, symptoms, and behaviors: (1) Do you feel intense anxiety or fear when confronted by certain animals, objects, or situations? (2) Do you think this fear is excessive or unreasonable? (3) Are you avoiding these animals, objects, or situations because of your fear? (4) In what ways has this anxiety or fear interfered with your life? (5) How would you react if you were exposed to the animal, object, or situation right now? (6) Have you ever fainted or almost fainted around blood, injuries, or needles?

The clinical interview may also cover additional, relevant areas including biologic risk factors for anxiety (e.g., familial heritability), age of onset, nature of onset (e.g., direct or vicarious acquisition; onset in the absence of negative experiences), beliefs and behaviors that have maintained the phobia across time, the evolution of substance use and safety behaviors as a way of attenuating anxiety-related symptoms, and previous treatment seeking and response.

Select questions during the clinical interview can also assist in differential diagnosis. The most common differentials include: panic disorder (high anticipatory anxiety across a range of situations; recurrent, unexpected panic attacks in the absence of any phobic cues; and, interpretation of physical symptoms as dangerous); social anxiety disorder (focus of concern over being embarrassed and negatively evaluated by others); obsessive compulsive disorder (experience of intrusive, unwanted thoughts; avoidance of objects related to obsessional theme); and posttraumatic stress disorder (onset following a potential life-threatening stressor; emotional numbing and reexperiencing the trauma). A common rule out among children is separation anxiety disorder, in which the focus of the fear involves perceived and actual separation from specific family members and loved ones.

3.2.3 Behavioral Assessment

Behavioral observation can be a simple, highly efficient, and informative method for assessing phobias. While individuals may become noticeably anxious or nervous when discussing their phobic fears, a behavioral approach/avoidance task (BAT) is an ideal part of the assessment process as it allows the clinician to directly observe the patient's reaction to various representations of phobic cues in "real time" (Antony & Swinson, 2000). Phobic cues, by definition, reliably elicit a fear response upon actual or anticipated exposure. The primary limitation of clinical interviews is the potential for retrospective recall biases. Furthermore,

pervasive avoidance behavior may also result in a lack of contact with the feared object or situation across time, thereby underscoring the importance and value of conducting BATs. While BATs should be planned in the same manner as an exposure-based intervention, the goal for the BAT is not to gain fear reduction in the presence of the phobic cue. Rather, BATs offer a current baseline of the nature and intensity of the fear response, including subtle and overt avoidance tendencies. Such a baseline can be used strategically as an index of treatment progress and outcome across time. The rationale and procedure for the BAT as part of the assessment process should be thoroughly explained to the patient and proceeded within a gradual, predictable, and controllable manner. Common areas to assess would include subjective units of distress rating (e.g., 0 = no fear at all, to 100 = intense anxiety), relevant physical reactions, fearful thoughts and beliefs, degree of approach, and subtle and overt avoidance behaviors.

3.2.4 Self-Report Measures

A plethora of self-report questionnaires is readily available and relatively easy to administer at any point during the assessment process. Self-report questionnaires can be an efficient means for gathering specific information on the range of phobic cues and triggers, especially when time is limited during the in-person clinical interview. Similar to the limitations of the clinical interviews, questionnaire responses are subject to recall biases and only provide an approximation of the individual's actual phobic response. Selecting the appropriate battery of questionnaires should consider including those measures directly relevant to the phobic condition of interest, screening for associated comorbid conditions (e.g., depression, substance use), and ruling out other related conditions (e.g., panic disorder). Furthermore, self-report measures can be readministered as a means of tracking treatment response and outcome, and may also provide useful information for designing exposure exercises. Clinicians are encouraged to select measures with sound psychometric properties and those with established norms to compare with community and clinical populations. The *Practitioner's Guide to Empirically Based Measures of Anxiety* (Antony, Orsillo, & Roemer, 2001) is an excellent resource with sample measures across a range of phobic conditions, easy to interpret scoring criteria, and brief summaries of normative studies. The portability and ease of administration of self-report questionnaires should be tempered with caution as to not overload patients with too many unnecessary measures at the outset. A stepwise approach of selecting additional measures based on the course of the evaluation process is a reasonable way of minimizing burden on the patient.

3.3 Maintenance Factors of Specific Phobia

3.3.1 Development

There is a significant heterogeneity in the expression of specific phobias, which is consistent with multiple pathways of etiology. The pathways to development of specific phobia may include classical conditioning, modeling or vicarious learning, and negative information transfer (Rachman, 1977). Although not without controversy (McNally, 1987), there is also

considerable evidence that some phobias are "pre-wired" for development through evolutionary selection (Davey, 2004). Indeed, phobias tend to be focused on a limited set of fears (i.e., snakes) that have evolutionary significance. In the context of a psychological vulnerability to experience anxiety (i.e., trait anxiety), experiences along any one of the different pathways may facilitate the development of phobic responses. Such responses are generally automatic and are not moderated by conscious cognitive control (Öhman & Soares, 1993). According to Öhman and Mineka (2001, p. 515), "[i]n the context of phobia, cognitions may be viewed as evolutionary shaped mechanism to assure that fearful individuals keep avoiding threatening situations. Thus, cognitions are important in maintaining phobic behavior."

3.3.2   Attentional Bias for Threat

Cognitive theories consider attentional biases to be central to the phenomenology of phobic behavior (Beck & Clark, 1997). Accordingly, the tendency for phobic individuals to display hypervigilance toward threat may maintain their propensity to respond with fear by reinforcing phobic beliefs. Although not without limitations (see MacLeod, 1991, for a review), the most frequently used paradigm for examining attentional bias among phobic individuals is a modification of the Stroop (1935) color-naming task (see MacLeod, for a review). In the Stroop task, participants are asked to name the color in which each word is presented while ignoring the meaning of the word. In the "emotional" Stroop task, slower color-naming of threat-relevant words is said to represent an attentional bias toward threat material. Color-naming interference as an indicator of attentional bias has been found in specific phobia (e.g., Lavy & van den Hout, 1993; Lavy, van den Hout, & Arntz, 1993) with phobics taking significantly longer to color-name phobic-relevant words.

The intensity of phobic complaints also appears to be significantly associated with the degree of color-naming interference for threat-relevant words (Van Den Hout, Tenney, Huygnes, & de Jong, 1997). Furthermore, it has been shown that the emotional Stroop interference effect for spider words in spider phobia is a function of threat rather than the emotionality of spider words (Thorpe & Salkovskis, 1997). Similar findings have also been reported with snake phobics, who take significantly longer to color-name snake words than do nonphobics (Wikstrom, Lundh, Westerlund, & Hogman, 2004). The heightened selective attention toward threatening stimuli that is captured by the Stroop task may also be magnified by perceptual distortions among phobic individuals. For example, spider-fearful individuals often inaccurately perceive spiders as "looming" or jumping toward them (Rachman & Cuk, 1992). Analysis of eye movements during visual exploration of threat-relevant stimuli has also shown that, relative to controls, phobics detected spiders faster and fixated closer to spiders during the initial search phase (Pflugshaupt et al., 2005).

3.3.3   Judgment Bias for Threat

Another cognitive bias that has been implicated in the maintenance of specific phobias is covariation bias, which refers to the tendency to overestimate the association between phobic stimuli and aversive outcomes (Tomarken, Mineka, & Cook, 1989). In a prototypical covariation

bias experiment, phobic participants are exposed to a series of images consisting of fear-relevant (e.g., snakes) and neutral (e.g., mushroom) stimuli. The offset of the image is followed by one of the three outcomes: an aversive shock, a tone, or nothing. Fear-relevant and fear-irrelevant images are equally often followed by each of the three outcomes. After the series of images, participants are asked to estimate the contingencies between images and outcomes. A consistent finding from studies employing this experimental design is that phobic participants systematically overestimate the contingency between phobic stimuli (snakes) and aversive outcomes (shock). This pattern of findings has been observed in snake phobia (McNally & Heatherton, 1993), spider phobia (Cavanagh & Davey, 2000; van Overveld, de Jong, & Peters, 2006), and flight phobia (Pauli, Wiedemann, & Montoya, 1998). Furthermore, the tendency to overestimate the association between phobic stimuli and aversive outcomes at posttreatment significantly predicts treatment relapse (de Jong, van den Hout, & Merckelbach, 1995). Covariation biases in phobias may also be reinforced by ex-consequentia inferences ("if I feel anxiety, there must be danger") as specific phobics believe that dangerous situations elicit anxiety and that experiencing anxiety implies the presence of danger. These inferences may legitimize avoidance and maintenance of fear (Arntz, Rauner, & van den Hout, 1995).

3.3.4 The Role of Disgust

The propensity toward experiencing disgust ("disgust propensity") may be a risk factor for the development of spider phobia and BII phobia (Olatunji & Sawchuk, 2005). It has been shown that spider phobic individuals respond with greater disgust-specific facial EMG activity than nonfearful individuals when exposed to spiders (i.e., activity of the m. levator labii; de Jong, Peters, & Vanderhallen, 2002). Although experimental evidence for a *causal* mechanism has not consistently been found (Thorpe & Salkovskis, 1998), disgust propensity may contribute to the *maintenance* of spider phobia and perhaps reinforce the behavioral avoidance (Woody, McLean, & Klassen, 2005). Indeed, disgust propensity appears to be a more potent predictor of behavioral avoidance of spiders among phobic individuals (Olatunji, Cisler, Meunier, Connolly, & Lohr, 2008; Woody et al., 2005). Research has also implicated disgust in the maintenance of BII phobia (Olatunji, Sawchuk, de Jong, & Lohr, 2006). Unlike spider phobia, disgust appears to be the primary emotion in BII phobia with fear being a secondary emotional response (Sawchuk, Lohr, Westendorf, Meunier, & Tolin, 2002). There is also evidence that BII phobics demonstrate an implicit memory bias for disgust-relevant stimuli (Sawchuk, Lohr, Lee, & Tolin, 1999).

3.3.5 Safety Behavior

Biased interpretations in specific phobia typically manifest in the overestimation of the likelihood and severity of a dreaded outcome. For example, people with acrophobia may assume that they are likely to fall and individuals with claustrophobia may believe that they will run out of air. Such biases may lead to the use of safety behaviors during exposure to threat. Safety behaviors (e.g., wearing long pants to prevent spiders from touching one's legs) contribute to the maintenance of specific phobia by preventing phobic individuals from experiencing an unambiguous disconfirmation of their unrealistic beliefs about feared behaviors and their

outcomes (see Rachman, Radomsky, & Shafran, 2008; Salkovskis, 1991). This is because phobic individuals attribute the nonoccurrence of feared outcomes to the safety behaviors in which they engaged. For example, an acrophobic individual may grip a rail (safety behavior) when confronted with a precipice. The individual may attribute not falling to gripping the rail. However, gripping the rail may signify that that there is something to be afraid of, which in turn maintains phobic fear of the situation (Salkovskis, 1991). In addition to cognitive and affective vulnerabilities, safety behaviors also maintain specific phobia.

3.4   Evidence-Based Treatments

3.4.1   Overview

Empirical research over the last 40 years has demonstrated that exposure to the feared stimulus is an efficacious treatment for specific phobia. Barlow, Raffa, and Cohen (2002, p. 315) state that: "a consensus has developed that the treatment of choice for specific phobias is exposure-based procedures, particularly in vivo exposure." Antony and Barlow (2002, p. 408) state: "almost all experts agree that exposure to feared objects and situations is both necessary and sufficient for treating the vast majority of patients with [specific phobia]."

Given the wealth of research on treatment for specific phobia, the current chapter uses a selective review for the purpose of highlighting the specific efficacy of particular treatment procedures for specific phobia. Growing concern over the proliferation of empirically supported psychological treatments has led contemporary research to focus on the development of empirically supported principles by which therapeutic change occurs (Barlow, Allen, & Choate, 2004; Lohr, DeMaio, & McGlynn, 2003; Lohr, Olatunji, Parker, & DeMaio, 2005; Rosen & Davidson, 2003). This latter movement emphasizes the elucidation of active treatment ingredients (i.e., therapeutic "mechanisms" of change) instead of credentialed, trademarked, treatment packages. Elucidation of active treatment components is achieved through the experimental analysis of treatment efficacy. This type of analysis refers to a systematic approach in which (1) a treatment's efficacy is tested against a logical progression of comparison groups, and (2) the treatment package is broken down into its constituent components that are independently tested in order to determine which are the active ingredients of the treatment (i.e., "dismantling studies"; Borkovec & Castonguay, 1998; Lohr et al., 2003, 2005). Strength of evidence for treatment efficacy increases linearly when demonstrated against the following comparison conditions: wait-list control, attention control, nonspecific factor control, and alternative credible treatment. In the following section, we present an experimental analysis of treatment efficacy for exposure-based procedures. The interested reader is referred to Choy, Fyer, and Lipsitz (2007) for a recent exhaustive qualitative review of treatment outcome research in specific phobia, and to Wolitzky-Taylor, Horowitz, Poweres, and Telch (2008) for a recent meta-analysis of specific phobia treatment efficacy.

3.4.2   Exposure-Based Treatments for Specific Phobia

Exposure refers to a therapeutic procedure in which the client is presented with the feared stimulus or situation in either an in vivo or imaginal manner (see Antony & Swinson, 2000;

chapters 5 and 6). For example, exposure for a person with spider phobia may entail approaching a live spider (i.e., in vivo exposure) or imagining oneself approaching a live spider (i.e., imaginal exposure). Exposure can be graded, in which the client approaches a series of increasingly fear-provoking situations. For example, a client with height phobia may look over a balcony at 10 ft, then 20 ft, then 30 ft, etc. Exposure can also involve confronting the most feared situation only (also known as "flooding"). For example, a person with claustrophobia may be shut into a small dark closet for a prolonged period of time. Exposure procedures have numerous variations, such as number of sessions, length of exposure duration, duration between sessions, therapist directed versus self-directed, etc. (Antony & Barlow, 2002), but all variants share the common theme of presenting the client with the feared situation or stimulus. Importantly, exposure procedures are repeated until the client no longer experiences a distressing degree of fear or discomfort.

3.4.3 Wait-List Control

Numerous studies have demonstrated that exposure-based treatments led to better treatment outcome compared to a wait-list control group (Choy et al., 2007), which only controls for measurement reactivity and regression to the mean (Lohr et al., 2003, 2005). For example, Öst, Alm, Brandberg, and Breitholtz (2001) found that individuals with claustrophobia who were treated with either one or five sessions of in vivo exposure to enclosed spaces exhibited significant posttreatment reductions in behavioral avoidance compared to the wait-list control group. Exposure-based procedures result in improved outcome relative to a no treatment group across phobia types, including flying phobia (Walder, McCracken, Herbert, James, & Brewitt, 1987), height phobia and driving phobia (Williams, Dooseman, & Kleifield, 1984), spider phobia (Gotestam & Hokstad, 2002), and dental phobia (Jerremalm, Jansson, & Öst, 1986). Additionally, exposure-based procedures are efficacious compared to no treatment among children and adolescents (Öst, Svensson, Hellstrom, & Lindwall, 2001).

3.4.4 Nonspecific Factor Control

A few studies suggest that exposure-based procedures lead to better outcome compared to nonspecific factor control groups, which control for elements that are common to most treatments such as a therapeutic ritual, treatment rational, and working alliance (Wampold, 2001). Efficacy when compared to this type of control demonstrates that the procedure contains an active ingredient that adds incremental efficacy to the treatment beyond that attributable to nonspecific factors, which is a strong evidence of therapeutic efficacy (Lohr et al., 2003, 2005). Powers, Smits, and Telch (2004) found that in vivo exposure resulted in greater fear reduction for claustrophobia compared to a sham physiological treatment in which participants were deceptively told that a treatment device would change their brain activity and help reduce their fears. Gilroy, Kirby, Daniels, Menzies, and Montgomery (2000) found that in vivo exposure resulted in improved outcome for spider phobia compared to a group who only received relaxation training. These studies demonstrate that exposure-based procedures contain an active therapeutic ingredient that add incremental efficacy above and beyond the benefits of nonspecific factors.

3.4.5   Credible Alternative Treatment Control

Research demonstrates that exposure-based procedures lead to better outcome compared to an alternative nonexposure-based treatment. Better efficacy when compared to a credible alternative treatment suggests that it is justifiable to market and disseminate the target treatment procedure as an efficacious treatment to the mental health community (Lohr et al., 2003). Biran and Wilson (1981) found that guided in vivo exposure produced better treatment outcome compared to cognitive restructuring for a variety of phobias, including fear of heights, elevators, and darkness. Booth and Rachman (1992) found that in vivo exposure for claustrophobia led to significant reductions on six outcome measures relative to an untreated control group, whereas as cognitive restructuring treatment and interoceptive exposure treatment (i.e., exposure to feared internal sensations) led to reductions in only two outcome measures relative to an untreated control group. In contrast, Öst, Alm et al. (2001) found that five sessions of cognitive restructuring for claustrophobia was as effective as either one or five sessions of in vivo exposure. These data suggest that in vivo exposure for specific phobia is likely to be more efficacious than cognitive therapy (also see Craske & Rowe, 1997), but future research is needed to resolve the current equivocal results.

3.4.6   Applied Tension and BII Phobia

BII phobia appears to be unique in that it is often associated with a fainting response in the presence of disorder relevant-stimuli (Page, 1994). Öst and Sterner (1987) have developed applied tension as a treatment procedure to target this fainting response. Applied tension involves exposure to the feared stimulus with concurrent tensing of the large muscle groups in order to prevent or attenuate the blood pressure drop accompanying the fainting response. While one study found that in vivo exposure alone was more effective than exposure plus relaxation (Öst, Lindahl, Sterner, & Jerremalm, 1984), either one or five sessions of applied tension is more effective than in vivo exposure alone (Hellstrom, Fellenius, & Öst, 1996; Öst, Fellenius, & Sterner, 1991). Additionally, Öst, Sterner, and Fellenius (1989) found a trend favoring applied tension over exposure plus relaxation.

3.4.7   Long-Term Follow for Exposure-Based Treatments

Choy et al. (2007) exhaustively review the treatment outcome research in specific phobia with regard to long-term follow-up. Available evidence suggests that treatment gains following in vivo exposure "were either maintained or improved further over time" (p. 274) for various types of phobias at follow-up assessments up to 14 months after therapy.

3.4.8   Efficacy as a Function of Different Exposure Procedures

Therapist-directed exposure tends to produce better outcomes compared to self-directed exposure (Öst, Salkovskis, & Hellstrom, 1991), and therapist-directed exposure is particularly better than self-directed exposure conducted at the client's home (Hellstrom & Öst, 1995).

Öst, Ferebee, and Furmark (1997) found that direct exposure led to better treatment outcome compared to either watching another person undergoing exposure or watching a video of another person undergoing exposure. One session of massed exposure tends to lead to similar outcomes compared to several sessions of exposure for spider phobia (Öst, 1996), claustrophobia (Öst, Alm, et al., 2001), or BII phobia (Hellstrom et al., 1996). Finally, Öst (1996) found that a single session of group exposure therapy, with up to eight clients per group, for spider phobia led to improvements comparable to individually administered exposure.

3.5   Mechanisms of Change in Exposure Therapy

3.5.1   Overview

Given the almost unanimous agreement that exposure is the treatment of choice for specific phobia (e.g., Antony & Barlow, 2002; Barlow et al., 2002; Choy et al., 2007), there is a surprising degree of current disagreement as to exactly *how* exposure works (e.g., Craske et al., 2008; Hofmann, 2008; McNally, 2007). In this section, we begin by describing one of the most influential theories, EPT (Foa & Kozak, 1986), and then discuss a contemporary alternative to this theory (Craske et al., 2008) and the resulting implications for how to conduct effective exposure therapy.

3.5.2   Emotional Processing Theory

EPT (Foa & Kozak, 1986) derives from Lang's (1977, 1979) bioinformational theory of fear, which posits a fear structure consisting of stimulus propositions, response propositions, meaning propositions, and interrelations between these propositional networks. Stimulus propositions refer to propositions about which stimuli elicit fear. For example, a spider phobic's fear structure would consist of stimulus propositions in which spider-related stimuli lead to fear (e.g., spider webs, spiders, basements, etc.). Response propositions refer to propositions about how the individual reacts when in the state of fear. For example, a spider phobic fear structure would consist of response propositions involving increases in heart rate, sweating, trembling, running away, finding someone else to kill the spider, etc. Meaning propositions refer to the subjective interpretations about stimuli that elicit fear or their responses during the state of fear. For example, an individual may interpret the spider as "scary," or their increased heart rate as "unbearable," etc. Interrelations between these three components comprise the "fear structure." Presentation of information consistent with these networks activates the fear structure.

EPT (Foa & Kozak, 1986) posits that the degree to which exposure therapy results in fear reductions is proportionate to the amount of information presented to the individual during exposure that is incompatible with the fear structure, once that fear structure is activated. Essentially, fear reduction occurs because of the "weakening" of the relations between the propositional networks. Within-session habituation refers to gradual reductions in fear after prolonged exposure to a feared stimulus. Such habituation may result from the disconfirmation of meaning propositions (e.g., "if I see a spider, it will bite me") during exposure. Within-session habituation also involves decreases in physiological responding, which then weakens

response propositions (e.g., "if I see a spider, my heart will pound uncontrollably") and the relation between stimulus propositions, response propositions, and meaning propositions. Disconfirmation of, and weakening relations within, these propositional networks comprising the fear structure is proposed to be the fundamental mechanism underlying exposure therapy. A weakened fear structure due to within-session habituation would lead to less initial fear during the following exposure session, termed between-session habituation. This between-session habituation is an indicator that weakening of the fear structure is occurring during exposure; thus, greater between-session habituation predicts better treatment outcome.

3.5.3 Optimizing Inhibitory Learning

Although EPT has been influential, Craske et al.'s (2008) recent review suggests that the basic postulates of EPT have not been consistently supported. That is, degree of initial fear activation, within-session habituation, and between-session habituation are not consistently predictive of positive treatment outcome. Craske et al. (Craske et al., 2008; Craske & Mystkowski, 2006) argue that instead of viewing exposure as "corrective learning" as explicated in EPT, exposure should be viewed as "inhibitory learning." That is, exposure works through new learning which inhibits the expression of the previous feared associations (e.g., snake – attack). This assertion is consistent with the basic science of Pavlovian conditioning suggesting that extinction does not involve erasure of previous associations, but instead involves new learning that inhibits the previous associations (e.g., Bouton, 2004; Bouton, Woods, Moody, Sunsay, & Garcia-Gutierrez, 2006; Rescorla, 1988).

Craske et al. (2008) outline several clinical strategies to bolster inhibitory learning during exposure that may lead to enhanced treatment outcome. Focusing on sustaining arousal during exposure, as opposed to focusing on habituation, would lead to better toleration of the sensations of fear as well as facilitate inhibitory learning. Using an exposure procedure tailored to an individual's negative expectancies, regardless of the level of experienced fear, may lead to enhanced fear reduction. For example, if a person with driving phobia expects a panic attack after driving 2 mi, driving 3 mi while not experiencing a panic attack may lead to better inhibitory learning of the previous driving – panic attack association. Using multiple feared stimuli during exposure may also enhance inhibitory learning. For example, presenting a spider phobic person with both a spider and a cobweb while in a dim-lit basement (i.e., three stimuli related to the person's phobia) may lead to enhanced treatment outcome. Another clinical procedure for enhancing inhibitory learning is preventing the use or availability of safety behaviors during exposure. For example, exposing claustrophobics to an enclosed space without the possibility of escape or fresh air leads to enhanced fear reduction compared to exposure to an enclosed space with the possibility of escape or fresh air (Powers et al., 2004).

3.6 Basic Competencies of the Clinician

3.6.1 Knowledge of Current Diagnostic Nomenclature and Criteria

Prior to the DSM-IV, specific phobia was known as "simple phobia." The terminology referring to excessive fears about specific objects or situations and the criteria by which an individual is

deemed to have these fears may continue to change as research on specific phobia continues to develop. A clinician treating or assessing for specific phobia should know the current diagnostic nomenclature and criteria for determining the presence of specific phobia.

3.6.2 Knowledge of Reliable and Valid Assessment Procedures for the Diagnosis of Specific Phobia

The use of structured clinical interviews may assist in the diagnostic process. BATs are also useful tools for assessing phobias and tracking progress throughout treatment. Various self-report measures also exist that can assist in measuring the presence and severity of symptoms. See the above "Assessment of Specific Phobia" section.

In a related vein, a clinician should have a basic understanding that comorbidity is common in the anxiety disorders (e.g., Barlow, 2002; Kessler et al., 2005). Such comorbidity may reflect common underlying diatheses across the anxiety disorders (e.g., negative affectivity; Barlow, 2002; Brown, Chorpita, & Barlow, 1998) or may also be due to shared diagnostic criteria across disorders (e.g., avoidance/endurance with distress; worry; panic attacks). Thus, a clinician should carefully conduct differential diagnosis and rule out competing anxiety-related diagnostic possibilities. For example, both specific phobia and generalized anxiety disorder may present with worry, but the worry in specific phobia will be circumscribed to a specific object or situation. An individual who avoids driving because of fear of a panic attack may have specific phobia of driving, but if that individual also avoids going to the mall, movie theaters, and the grocery store because of fear of panic attacks, the diagnosis is likely panic disorder.

3.6.3 Use of Nonspecific Treatment Factors

Therapeutic practices that are common to most treatments, such as therapeutic ritual, rationale, therapist's allegiance, and therapeutic alliance, can produce meaningful therapeutic change (Wampold, 2001). Basic competencies of the clinician treating specific phobia should include the use of nonspecific treatment ingredients. These should include, but may not be limited to, providing the client with (1) an explanation of what specific phobia is and how to treat it (i.e., a rationale), (2) a treatment protocol that maps onto the rationale, thus providing credibility, and is repeated until benefit occurs (i.e., a ritual), (3) a clinician with enthusiasm and understanding of the theory and treatment of specific phobia (i.e., therapist allegiance), and (4) a clinician who works collaboratively with the client to conceptualize the problem and design an ideographic treatment plan (i.e., therapeutic alliance).

3.6.4 Incorporate Psychoeducation of General Emotional Processes into Treatment

Emotion science has increasingly informed the theory and treatment of anxiety disorders (Barlow et al., 2004). Using the vast literature on emotion to educate the client about basic emotional processes may prove valuable for the client for a number of reasons. First, emotion

regulation has become an increasingly popular topic of research and theory in the anxiety disorders (e.g., Moses & Barlow, 2006). One component of emotion regulation is emotional awareness (Gratz & Roemer, 2004). Teaching the client to identify emotions, emotional experiences, and their meaning may help clients regulate negative moods effectively. For example, clients may misinterpret excessive anxiety responses as indicative of medical problems. Education about how to recognize anxiety may allow such individuals to identify their experience and respond with appropriate coping skills (e.g., breathing, reappraisal, etc.). Second, education about emotion may provide clients with increased prediction and control over their emotional experiences. Situations or experiences that are unpredictable and/or uncontrollable may elicit anxiety (Barlow, 2002). If a client can identify their experience as anxiety or fear and recognize that these emotions arise due to the particular situations, they may experience an increase in prediction and control over their dysfunctional emotional experiences. Third, Barlow (2002) argues that anxiety disorders commonly co-occur due to a shared diathesis, heightened negative affectivity. Specific phobia is no exception, with one model positing that the development of specific phobia includes a predisposition toward negative affect (Antony & Barlow, 2002). If specific phobia is associated with general heightened negative affectivity, then it is likely that clients with specific phobia experience excessive anxiety, either at the clinical or subclinical threshold, in other domains. Providing clients with basic emotion psychoeducation could help them identify and cope with anxiety in other areas of their life where it may be needed.

3.6.5   Use of Procedures to Monitor Fear During Treatment

A clinician treating specific phobia should continually monitor the client's level of fear throughout treatment as a means of testing treatment progress. Fear is typically assessed in three response systems (Lang, 1968; Lipp, 2006): behavioral avoidance, physiological arousal, and subjective distress (but note that correlations between these response systems is low; Lang, 1968). Accordingly, when assessing a client's level of fear toward the phobic object, the clinician should assess across these response systems, such as observe whether the client avoids the object, ask whether the client's heart is beating faster, and ask about the client's subjective distress. For example, to assess the current level of fear in an individual with claustrophobia, the client and clinician could go into a closed elevator (noncompliance from the client would be an indicator of avoidance) and the client could report physiological symptoms (e.g., sweating, heart racing, etc.) and distress.

3.6.6   Basic Knowledge of Maintenance Processes in Specific Phobia

A wealth of research has investigated the maintenance processes of specific phobia (see above Maintenance Factors section). An exhaustive familiarity with the processes is not necessary for basic clinical competency in specific phobia. We suggest that the most basic maintenance process with which the clinician should be familiar is safety behaviors. Safety behaviors refer to either overt or covert behaviors to prevent the occurrence of feared outcomes (Salkovskis, 1991; Rachman et al., 2008). The clinician should first assess which behaviors, either overt or covert, the client uses to avoid harmful outcomes associated with the phobic object. For

example, does an individual with spider phobia scan the bedroom for spiders to make sure it is spider-free before going to bed? Does a person with height phobia ask how many floors are in a building prior to scheduling an interview in that building? Does an individual with a phobia of driving over bridges plan out driving routes ahead of time to ensure not having to cross bridges? Safety behaviors may also entail ensuring the availability of avoidance behaviors in case of encounters with phobic situations. For example, an individual with claustrophobia may carry Xanax with them to use in case they cannot avoid contacting enclosed places. A person with a phobia of insects may keep spray bottles of insecticide with them in case of encounters with insects.

After assessing which safety behaviors the client uses to prevent feared outcomes, the clinician should educate the client about the problems with safety behavior use. For example, safety behavior use may interfere with corrective learning, such that safety behavior use prevents the individual from fully encountering the feared situation and allowing complete exposure to occur (e.g., Powers et al., 2004). Rachman et al. (2008) argue for the judicious use of safety behaviors, rather than the complete extinction of safety behavior use. They suggest that safety behaviors should be gradually weaned off throughout treatment instead of all at once in order to make exposure-based therapy more tolerable for the client. Accordingly, after identifying safety behaviors, the clinician and client should develop a plan to gradually stop the use of safety behaviors during treatment.

3.6.7 Familiarity with Empirically Supported Principles of Therapeutic Change for Specific Phobia

As reviewed above, exposure is considered the preferred treatment for specific phobia (Antony & Barlow, 2002; Barlow et al., 2002; Choy et al., 2007). Basic clinical competencies of a clinician treating specific phobia should include working knowledge of how to conduct exposure. The basic clinical competencies of conducting exposure should include the following basic concepts (also see Richard, Lauterbach, & Glostner, 2007 for a discussion of basic components of exposure therapy). First, the clinician should know that, when possible, in vivo exposure is typically the preferred mode of delivery (Barlow et al., 2002; Craske & Rowe, 1997). Second, a representative list of stimuli to which the client should be exposed should be generated collaboratively with the client in order to ensure that stimuli used in exposure are appropriate and relevant for the individual. For example, individuals with BII phobia may present with fears of vastly different objects, and individuals with spider phobia may present with fears of different types of spiders. Accordingly, the clinician needs to assess the specifics of the objects or situations that elicit fear for each individual with specific phobia.

Third, exposure therapy, by definition, must entail repeated and prolonged exposure to the relevant phobic stimuli. Fortunately, specific phobia has shown excellent clinical improvement to only a few sessions of prolonged and/or repeated exposure (see "Evidence-Based Treatments" section). Fourth, the therapist should model appropriate nonfearful performance of the desired behavior (Öst, 1997). Naturally, the clinician should ensure he/she is capable of confronting the client's feared situation prior to beginning exposure with the client. Fifth, the clinician should assess across response systems during exposure to the feared stimuli. These assessments should be repeated continually throughout exposure in order to provide continued assessment of treatment progress.

Sixth, once the client can approach all the previously fearful situations with minimal discomfort, the therapist and client should make maintenance a goal and be sure to conduct a collaborative assessment at a later date in the future (e.g., 6-month follow-up assessment). Seventh, therapist-guided exposure should be viewed as a starting point for living a life without excessive fear of the phobic situation, such that after therapy the client will need to continue to expose themselves to the phobic situation in order to maintain gains made in treatment (Öst, 1997). The interested clinician is referred to Antony and Swinson (2000; chapters 5 and 6) for a detailed description of how to plan treatment for specific phobia and conduct exposure therapy, including scripts for explaining the rationale as well as examples of homework to provide clients.

3.7   Expert Clinical Competencies

3.7.1   Awareness of Behavioral Strategies to Augment the Effectiveness of Exposure-Based Interventions

Extinction of the fear response to phobic cues is a generic and incomplete model of evidence-based exposure therapy. Relapse, return of fear, and incomplete treatment responders commonly occur over the course of phobia treatment. Learning-based models of fear reduction during exposure therapy now argue that the process of extinction is an active, new, associative process (Bouton, 2002, 2004). While therapy is designed to promote physiological habituation and exposure to corrective information, phobic individuals are also trying to learn inhibitory fear responding (e.g., resisting the urge to escape and avoid the phobic cues). Inhibitory fear learning is a new form of learning that is highly influenced by the situation or context in which it is learned (Bouton et al., 2006). Medications, presence of a therapist, and the physical characteristics of the environment(s) are all relevant factors to consider when conducting exposure therapy as many of these factors may change or not be present in the phobic individual's day-to-day living. Extinction trials can therefore be optimized by conducting exposure exercises in multiple contexts to reduce the risk of relapse due to shifts in context (Chelonis, Calton, Hart, & Schachtman, 1999; Gunther, Denniston, & Miller, 1998; Vansteenwegen, Dirikx, Hermans, Vervliet, & Eelen, 2005).

Studies with spider phobics have found that altering external and internal contexts during exposure treatment can have a negative impact on treatment outcome. For example, Mineka, Mystkowski, Hladek, & Rodriguez (1999) found that the return of fear among spider phobics was greater among those treated and retested in different environments than those phobics treated and retested in the same environment. Furthermore, Mystkowski (2003) randomized spider phobics to receive either the same (caffeine–caffeine or placebo–placebo) or different (caffeine–placebo or placebo–caffeine) internal contexts between exposure treatment and the time of retest. Greater return of fear was found among those participants tested and retested in discordant internal states.

The presence of safety-related cues during exposure therapy can also interfere with effective fear reduction as many safety cues that are present during exposure therapy sessions (i.e., presence of the therapist) are typically not present between sessions. Discordant safety and nonsafety cues represent a context shift that can negatively impact the return of fear. For example, Powers et al. (2004) showed that claustrophobic individuals undergoing exposure

therapy who had safety behaviors available (e.g., communicating with the experimenter, unlocking the chamber door, letting air in) interfered with fear reduction at both posttreatment and follow-up. The therapeutic mechanisms underlying exposure therapy should therefore be fully explained to patients, emphasizing the structure of within- and between-session exposure exercises in a manner that addresses these context shifts.

3.7.2 Awareness of Pharmacologic Strategies to Augment the Effectiveness of Exposure-Based Interventions

Technological advances in brain imaging have facilitated our understanding of the neurobiological mechanisms associated with fear responding. Translational research efforts have subsequently explored the role biological agents may play in enhancing learning, which in turn, may augment the durability of exposure-based treatments (Hofmann, 2007). Specifically, lower doses of D-cycloserine (DCS), a partial N-methyl-D-aspartate agonist, can facilitate extinction learning in both animals (Richardson, Ledgerwood, & Cranney, 2004) and humans (Ressler et al., 2004). DCS does not appear to facilitate extinction learning during fear reduction trials; rather, the mechanism of action appears to impact the consolidation of new extinction learning between exposure trials (Santini, Muller, & Quirk, 2001; Woods & Bouton, 2006). Randomized trials to evaluate the role of DCS in exposure-based interventions for anxiety disorders are preliminary and ongoing. One published study thus far has investigated the augmentation of DCS with standard exposure therapy for acrophobia (Ressler et al.). Participants ($N = 28$) were randomized to receive either DCS (50 or 500 mg) or a pill placebo while undergoing virtual reality exposure therapy for height-related fears. Both DCS conditions outperformed placebo on all subjective, behavioral, and physiological outcome measures, with no indication of dose-dependent enhancement for the DCS. Although further investigation is clearly warranted, clinicians should remain up to date with translational research findings that may enhance the retention and durability of treatment gains following exposure-based interventions.

3.7.3 Influence of Culture on Specific Phobias

Cross-cultural studies have found that animal, situational, natural environmental, and BII subtypes are similarly represented in other cultures (Arrindell et al., 2003; Davey et al., 1998; Pull, 2008). Relative to Caucasians, the prevalence of specific phobias tend to be lower among Hispanic and Asian adults (Stinson et al., 2007). These statistics, however, can be misleading as the DSM-IV TR diagnostic criteria for specific phobia are defined within a western cultural framework. Cultural idioms of distress and the listing of culture-bound syndromes have only been recently recognized in the transition from the DSM-III-R and the DSM-IV (Mezzich, Kleinman, Fabrega, & Parron, 1996). Culture can exert a strong influence over the conditioning process, and may predispose individuals to selectively attend to certain culturally relevant threat cues. Likewise, culture can shape the manifestation and expression of physical, emotional, cognitive, and behavioral symptoms associated with the phobic response (Manson, 1996). Consultation and collaboration with "cultural experts" (e.g., medicine men, spiritual/religious leaders) are particularly important to better

understand the nature and meaning of the phobic response and how evidence-based principles of exposure therapy may be delivered in a manner that is culturally appropriate. Expert clinicians should follow the progress of the DSM-V cross-cultural workgroup who are tasked with advancing knowledge on cultural factors affecting epidemiology, assessment, and treatment outcome among diverse populations.

3.8 Transition from Basic Competence to Expertise

3.8.1 Overview

The proliferation and marketing of "named" treatments has prompted Rosen and Davidson (2003) to call for the dissemination of treatments based on such empirically supported principles, rather than therapies per se. There are a number of such principles upon which to draw in the implementation of treatment, some of which have been specified earlier in our analysis. The following is an explication of several principles that can be incorporated in the transition from basic competency toward that of expert competency.

3.8.2 Mobilization of Nonspecific Factors

We would like to argue that the recognition of nonspecific factors and the mobilization of them in the process of helping is one aspect of the transition from basic competence to expert competence. One way to effect the transition is to identify contextual factors in which the helping process is imbedded (Frank, 1961) and processes that are common to many different treatments. These include, but are not limited to, suggestion, persuasion, treatment credibility, therapist attention, expectancy for improvement, effort justification, and therapist allegiance to treatment modality (Gaffan, Tsaousis, & Kemp-Wheeler, 1995; Luborsky et al., 1999).

The construct of "therapeutic alliance" has gained substantial currency in psychotherapy process research as one important common factor that has substantial predictive power for beneficial change (Ahn & Wampold, 2001; Wampold, 2001). The components of alliance (Hatcher & Behrends, 1996) include confident collaboration, goals and tasks, bond between therapist and client, and client dedication. Goldfried and Davison (1994) in describing the behavior therapy relationship identify similar processes: goal specification, positive expectations of treatment process and change, therapeutic contract, therapist as a significant other, and the relationship as representative sample of behavior for the change process. Although the functional role of the therapeutic relationship has been difficult sometimes to demonstrate (DeRubeis, Brotman, & Gibbons, 2005; Woody & Adessky, 2002), there is little doubt that it should not be ignored in the process of moving from apprentice, to yeoman, to master clinician.

3.8.3 Mapping and Modifying the Content and Organization of Fear

Communication with clients regarding what they fear and how they respond to such things and activities is the lynch pin of effective clinical intervention in the treatment of specific

phobia. The task of the clinician is to help elucidate the content and organization of the subjective experience of the client. One way to do so is to adopt and implement Peter Lang's (1977, 1979) characterization of the propositional network that serves as the functional basis for fear imagery and its relationship to physiological activation and somato-motoric adaptation (see "Mechanisms of Change in Exposure Therapy" section for description of Lang's propositional network). Lang et al. have provided clear evidence for the physiologic activation function of fear imagery across different phobic domains and imagery ability (Cook, Melamed, Cuthbert, McNeil, & Lang, 1988). Most important, however, is the demonstration that it is the response propositional features of the network that elicit the greatest physiologic reactivity and verbal report of the fear response (Lang, Levin, Miller, & Kozak, 1983).

Foa and Kozak (1986) have extended the analysis suggesting that effective treatment of phobia is that which "disintegrates" the fear structure by changing the propositional content and connective structure of the network. Grayson and Borkovec (1978) have shown that modifying the response propositional features of the fear narratives (e.g., hierarchy items) from avoidance and noncoping to that of mastery result in less-intense subjective fear. Moreover, Hodges, McCaulay, Ryan, & Stroshal (1979) showed that hierarchy narratives with coping imagery were as effective as the standard systematic desensitization of fear imagery in reducing test anxiety.

3.8.4 Changing Danger and Safety

The relationship between the prediction and control of aversive events in the acquisition and maintenance of anxiety disorders has received considerable research attention over the past 2 decades (Zvolensky, Lejuez, & Eifert, 2000). Aversive events that are unpredictable and uncontrollable have a stronger negative impact on functioning than the same aversive events that are predictable and controllable (Barlow, 2002; Mineka & Zinbarg, 1996). Such experimental research has led theorists to articulate how specific phobia (Craske, 1991), and other anxiety disorders (Foa, Zinbarg, & Rothbaum, 1992; Mineka & Zinbarg, 1996), may be mediated by dimensions of unpredictability and uncontrollability. Moreover, these domains have also been shown to contribute to the maintenance of avoidance behaviors that interfere with the modification of clinical anxiety (Barlow, 2002). A more complete understanding of the clinical application of these findings requires consideration of an important prior question: "Prediction and control of what?" The likely answer involves the psychological functions of danger and safety and those events that signal the occurrence of danger and safety (Lohr, Olatunji, & Sawchuk, 2007). The transition from competence to expertise may be facilitated by an understanding of these processes.

Danger signals may be broadly defined as stimuli that indicate the onset of a threatening event. Examples of external danger signals include objects, such as snakes and spiders, that become the focus of specific phobias (e.g., McNally, 1987). However, danger signals can also arise from the internal environment, such as physiological arousal (e.g., Schmidt, Forsyth, Santiago, & Trakowski, 2002). One kind of safety signal is defined as that which predicts the offset of an aversive event. This process is a form of signal learning that connects two distinctive events, such as when an auditory tone and shock offset occur contiguously. The consequence is the learning of "relief." However, there exists the potential for learning a second form of safety signal; stimuli that predict the absence of onset of an aversive event. Notice that this

type of safety signal predicts the absence of (expected) onset of an aversive event, which might be considered "respite" rather than relief.

We suggest that when administering specific treatment components, such as relaxation training or exposure, the therapist should emphasize the safety signal function of self-administration or "self-control." For example, it was demonstrated early on by Goldfried and Trier (1974) that when relaxation training is learned as an active coping skill, its effects on anxiety symptoms are better than standard progressive relaxation training. We propose that the phrases "self-control" and "active coping skill" are other labels for the increased ability to control safety and danger when circumstances (signals) call for it. Because safety signals mediate approach behavior in an instrumental fashion, exposure tactics could be redesigned to encourage travel through dangerous situations toward safe places or people (Rachman, 1984). For example, placing a trusted companion on the far side of a bridge may then encourage approach behavior in specific phobics, thereby facilitating habituation and/or fear-inhibiting mastery behavior (e.g., Sartory, Master, & Rachman, 1989).

A final point to consider in treatment is that all things threatening and safe cannot be completely and unequivocally predictable and controllable. Anxious patients maintaining such unrealistic expectations of complete predictability and controllability may not fare well over the course of treatment and may be prone to relapse over the longer term. Although behaviorally oriented interventions are designed to improve one's sense of prediction and control of danger and safety, a goal of treatment should also improve one's tolerance and acceptance of objects, situations, and events that are unpredictable and/or uncontrollable.

3.8.5   In Vivo Exposure as Validation of Consultation Room Exposure

Consultation room exposure is most formally implemented via imaginal rehearsal, as in progression through a systematic desensitization hierarchy, or through the flooding procedure. However, "exposure" can also occur in the process of mapping the propositional fear network. One or the other of these processes can be followed by structured exposure to the feared events outside the consultation room. The transition from basic to expert will likely require the clinician to leave the consultation room and accompany the client to the criterion situations. Active clinician participation can be the vehicle for participant modeling, coaching, and the acquisition of nonfearful behavior. It may facilitate the inhibition of fear responses and/or the acquisition of fear-incompatible response, such as those involved in active coping (Grayson & Borkovec, 1978) and mastery skills (Hodges et al., 1979). Moreover, clinicians may gain the satisfaction of directly experiencing the clinical gains that they might only hear about in the consultation room.

3.8.6   Intervention as a Collaborative Problem-Solution

It is our opinion that a substantial amount of clinical skill is manifested in "behavioral nonspecifics," one of which is the collaboration among clinician and client in problem definition and solution implementation. These processes have been rendered into treatment specifics in the intervention upon a number of psychological disorders (D'Zurilla, 1986), most notably that of depression (Nezu, Nezu, & Perri, 1989). Problem-solving has subsequently been extended to

decision making as a strategic clinical process (Nezu & Nezu, 1989) for a wide range of clinical disorders. The transition from basic competency to that of expert is facilitated by integrating the analysis of clinical conditions with the analysis of their modification into a broader consideration of skill and competency development that will incorporate more molar considerations (i.e., bigger problems). Moreover, the development of strategic problem-solving abilities will help generalize self-management beyond the original focus of intervention to other problems that will likely be experienced in other circumstances well into the future. The clinician may not initiate intervention with the strategic issues in mind, but the implementation of collaborative problem-solving on immediate and "molecular" problems should evolve and elaborate into applications upon future problems not immediately apparent.

3.9   Summary

This chapter has summarized the vast specific phobia literature in domains of assessment, maintenance, treatment, and mechanisms of change in treatment. Relevant findings in these areas facilitate the development of basic and expert clinical competencies in specific phobia. We have argued that basic clinical competencies should entail knowledge about assessment, psychoeducation, treatment planning, and protocols for conducting exposure. Expert clinical competencies may entail advanced understanding and enactment of procedures to augment exposure therapy as well as an understanding that cultural factors may affect the presentation and maintenance of specific phobia. Basic principles that may facilitate the developmental trajectory from basic to expert clinical competencies in specific phobia include mobilization of nonspecific factors, mapping the structure of the client's fear in order to help elucidate the content and organization of the subjective experience of the client, identifying signals of danger and safety for the client, conducting exposure outside of the consultation room, and using collaborative problem-solving skills with the client to treat the phobia.

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4 Agoraphobia

Paul M. G. Emmelkamp · Mark B. Powers

Abstract: This chapter summarizes the literature on assessment, maintenance, treatment, and mechanisms of change in treatment of patients with panic disorder with or without agoraphobia. Relevant theoretical contributions which are discussed may help to understand the genesis and maintenance factors of panic disorder and agoraphobia. Further, we provide an overview of empirically supported treatment approaches for these disorders and discuss the mechanisms of change involved in these treatments Knowledge of the burgeoning literature in this area is relevant for the development of basic and expert clinical competencies in panic disorder/agoraphobia. It is argued that the clinician should first be familiar with the diagnostic criteria for panic disorder and for agoraphobia. Knowledge of structured clinical interviews is needed to be able to formalize the diagnosis. In addition, knowledge of self-report measures, behavioral assessment, and self-monitoring is needed to assess the quality and severity of panic disorder and agoraphobia and to evaluate progress of treatment. Further, basic competencies also require knowledge on which factors are involved in the maintenance of these disorders. In addition, basic clinical competencies should entail knowledge about psycho-education, and evidence-based protocols for conducting interoceptive exposure and exposure in vivo outside the therapist office. Expert clinical competencies may entail advanced understanding and skills of applying psychological and pharmacological procedures to augment exposure therapy, skills in enactment of cognitive therapy and couple therapy, knowledge and skills to deal with panic disorder and agoraphobia in cases with comorbid disorders (e.g. substance abuse/dependence, and depression) as well sensitivity to anxiety related cultural factors.

4.1 Overview

Panic disorder (PD) is characterized by recurrent panic attacks, which are the discrete periods of intense fear and discomfort, often occurring unexpectedly. Panic attacks are accompanied by a number of symptoms, such as shortness of breath, dizziness, palpitations, trembling, sweating, choking, abdominal distress, depersonalization or derealization, fear of dying, or fear of going crazy. PD often leads to extensive avoidance behavior (agoraphobia), since these patients fear being in places or situations from which it is difficult to escape, or in which there is no help at hand in case of a panic attack. PD usually starts between late adolescence and early 30s. In many cases, the first attack is triggered by psychosocial stress (e.g., living on one's own, physical illness, delivery, or medical treatment). It is notable that agoraphobia is much more common in women than men, where as PD is more equally distributed between the sexes, though still more common in women. A recent meta-analysis (Bekker & van Mens-Verhulst, 2007) provides the following female/male gender ratios: agoraphobia 4:1; and panic disorder 2:1. Interestingly, the female/male ratio of patients who suffer from both PD and agoraphobia is in between: 3:1.

In this chapter, we will first describe the clinical features of agoraphobia and PD in order to better recognize, diagnose, and assess these disorders. Then, we will discuss relevant theoretical contributions which may help understand the genesis and maintenance factors of PD and agoraphobia. Further, we will provide an overview of empirically supported treatment approaches for these disorders and discuss the mechanisms of change involved in these treatments. Finally, we will discuss the basic and expert competencies needed for clinical psychologists who will assess and treat patients with PD and/or agoraphobia.

4.2 Recognition and Assessment

4.2.1 Panic Disorder

The major features of PD are recurrent panic attacks, interspersed with anticipatory anxiety of further attacks and, in around 65% of individuals, agoraphobic avoidance. At some point, the panic attacks were unexpected. Panic attacks are discrete periods of intense fear associated with at least four physical and cognitive anxiety symptoms, which develop suddenly and peak within 10 min. Although DSM-IV-TR states that in panic attacks anxiety peaks within 10 min, in a number of patients, time to peak may take longer than 10 min, especially in very severe panic attacks (Norton, Zvolensky, Bonn-Miller, Cox, & Norton, 2008; Scupi, Benson, Brown, & Uhde, 1997).

Before DSM-III introduced the category of PD, two syndromes were commonly diagnosed: (1) "hyperventilation" with dyspnoea, paresthesiae, and fear of dying by choking; and (2) "cardiac neurosis" with symptoms resembling those of angina pectoris: chest discomfort or pain, palpitations, tachycardia, and fear of dying. Starting with DSM-III, both these groups of symptoms are listed under "panic disorder" in the Diagnostic and Statistical Manual (DSM). DSM-IV-TR lists 13 physical and cognitive anxiety symptoms, four of which must be present in order to formally qualify for a PD. Panic attacks with fewer than four symptoms are referred to as limited symptom attacks. Not all symptoms contribute equally to the severity of panic attacks. The best items to predict *severity* of panic attacks are paresthesia, choking, and fear of dying. The items such as shortness of breath, chest pain, and dizziness are markers of moderate severity. Although palpitation is the most frequently reported symptom among the panic attack symptoms, it is only discriminated between cases and noncases at low levels of panic attack severity (Ietsugu, Sukigara, & Furukawa, 2007).

In clinical practice, a number of patients with PD are characterized by blurred vision, headache, diarrhea, and frequent urination in addition to a number of the 13 symptoms currently listed in DSM-IV-TR. This might be especially relevant with respect to agoraphobia. Agoraphobic situations may be avoided by different patients for different reasons – fear of fainting, dying, urinating, or defecating, or just panic.

As reflected in the DSM-IV-TR, panic-related catastrophic thoughts include: (a) concern about having future attacks, (b) worry about the implications or consequences of the attacks, or (c) a significant change in behavior due to the attacks (i.e., agoraphobia). Most panic patients (about two thirds) fear that something is physically wrong (e.g., having a heart attack); about half of panic patients fear that the symptoms mean they will lose control

or go crazy; and approximately one third of them fear negative social evaluation by others due to the symptoms (e.g., people may think I am weird). In addition, one out of four patients fear that the discomfort from panic attacks will be intolerable (Raffa, White, & Barlow, 2004).

4.2.2 Agoraphobia

The classification of agoraphobia within the DSM for mental disorders has undergone significant changes over time. Originally in DSM-III, agoraphobia was classified as a phobic disorder that could occur with or without panic attacks. Agoraphobia is the anxiety about being in situations from which escape might be difficult or in which help may not be available in the event of having a panic attack or panic-like symptoms. This anxiety typically leads to a pervasive avoidance of a variety of situations such as being alone at home, being in crowded places, entering shops, and walking and traveling alone.

In DSM-IV-TR, agoraphobia is defined as following:

- Agoraphobia is the anxiety about being in places or situations from which escape might be difficult (or embarrassing) or help might not be available in the event of having an unexpected or situationally predisposed panic attack or panic-like symptoms. Agoraphobic fears typically involve characteristic clusters of situations that include: being outside the home alone; being in a crowd or standing in a line; being on a bridge; and traveling in a bus, train, or automobile.
- The situations are avoided (e.g., travel is restricted) or else are endured with marked distress or with anxiety about having a panic attack or panic-like symptoms, or require the presence of a companion. Phobic avoidance may be motivated by unrealistic fears of the *consequences* of having panic symptoms in particular situations where the person feels trapped or far from help.

4.2.3 Structured Interviews

A number of structured interviews are available to formally assess the diagnosis of PD and agoraphobia (e.g., Structured Clinical Interview of Disorders, Axis-I (SCID-I), First, Spitzer, Gibbon, & Williams, 1996; the Composite International Diagnostic Interview – CIDI. WHO, 1997; and the Mini-International Neuropsychiatric Interview – MINI, Sheehan et al., 1998). More specific structured interviews for anxiety disorders and for PD are the following:

Anxiety Disorders Interview Schedule-IV (Brown, DiNardo, & Barlow, 1994). The Anxiety Disorders Interview Schedule-IV (ADIS-IV) is a semi-structured clinical interview designed to permit differential diagnosis among anxiety and mood disorders and screens for other major disorders (e.g., substance abuse, psychosis, somatoform disorders). It includes the "number of panic attacks in the last month." The ADIS-IV has good-to-excellent reliability and validity (Brown, Di Nardo, Lehman, & Campbell, 2001).

Panic Disorder Severity Scale (PDSS; Shear et al., 1992). The PDSS is a seven-item clinician-rated scale measuring PD severity over the past month. Items are rated on a scale ranging from

0 (not present) to 4 (extreme/incapacitating) and assess panic attack frequency, distress during panic attacks, severity of anticipatory anxiety, situational fear/avoidance, fear/avoidance of panic sensations, and impairment in work/social functioning. The seven items are summed to derive a total score ranging from 0–28, with higher scores reflecting greater symptom severity. The PDSS has demonstrated high interrater reliability (0.73–0.88), validity, and sensitivity to change following the treatment of PD (Shear et al.).

4.2.4   Panic Registration

It is often helpful to have patients record their panic attacks in a specially designed panic diary (e.g., Clum, 1990; Emmelkamp, Bouman, & Scholing, 1993). Participants register the date, situation, intensity, duration, and symptoms of every attack, and whether the attacks are expected or unexpected.

4.2.5   Questionnaires

There are a number of questionnaires available to assess PD and agoraphobia such as: *Panic Disorder Severity Scale, Self-Report Version* (PDSS-SR; Houck, Spiegel, Shear, & Rucci, 2002). The PDSS-SR consists of seven questions and includes ratings (0–4) of five main components of PD (panic frequency, distress during panic, anticipatory anxiety, agoraphobic avoidance, and avoidance of activities that cause panic-like sensation) and the degree of work/home and social impairment due to panic. It has been shown to have good internal consistency (Cronbach's $\alpha = 0.92$) and test–retest reliability (intraclass correlation coefficient, 0.81) (Houck et al., 2002).

Anxiety Sensitivity Index (ASI; Reiss, Peterson, Gursky, & McNally, 1986). The ASI is a 16-item questionnaire assessing respondents' fear of physical sensations associated with anxiety. Items are rated on a scale ranging from 0 (very little) to 4 (very much), resulting in a total score of 0 to 64, with higher scores reflecting greater levels of anxiety sensitivity. The ASI has good internal consistency in clinical and nonclinical populations and good test–retest reliability (Peterson & Reiss, 1993) and has demonstrated sensitivity to change following treatment for PD (Hazen, Walker, & Eldridge, 1996).

Mobility Inventory for Agoraphobia (MI; Chambless, Caputo, Jasin, Gracely, & Williams, 1985). This questionnaire measures the degree of agoraphobia in a range of situations. The inventory has two parts; the patient rates the degree of avoidance when alone and when accompanied by a trusted person. The 27 items on two parallel dimensions have a scale range of 1 (low avoidance) to 5 (high avoidance).

Panic Appraisal Inventory (PAI; Telch, Brouillard, Telch, Agras, & Taylor, 1989). The PAI was developed to assess coping with panic, the perceived likelihood of panic across various situations, and the anticipated catastrophic consequences of panic. These are measured on separate scales: PAI–Panic Coping, PAI–Anticipated Panic, and PAI–Panic Consequences. In addition, the PAI–Panic Consequences scale has three subscales assessing the specific consequences: physical (e.g., "I may have a heart attack"), social (e.g., "I may embarrass my family or friends") and loss of control (e.g., "I may go insane"). The PAI has good test–retest

reliability and internal consistency (Cronbach's α) for its various scales and subscales (Telch et al., 1989).

The Body Sensations Questionnaire (Chambless, Caputo, Bright, & Gallagher, 1984) measures physiological sensations experienced by patients with anxiety disorders.

Further, several cognitive questionnaires have been developed to assess the content and frequency of agoraphobic patient's thoughts. The main ones with adequate psychometric properties are the *Agoraphobic Cognitions Questionnaire* (ACQ; Chambless et al., 1984) and the *Catastrophic Cognition Questionnaire* (CCQ; Khawaja & Oei, 1992). The ACQ was developed to assess (on a scale from 1 to 5) frequency of thoughts about catastrophic consequences of anxiety and panic. In addition to a total score that represents a mean value of scores on 14 individual items, the ACQ yields a mean score on two subscales: One reflects the anticipated physical consequences of panic attacks (e.g., "I will have a heart attack"), whereas the other refers to anticipation of loss of control as a result of panic (e.g., "I am going to go crazy"). Construct validity, discriminant validity, and its internal consistency (Cronbach's α) are satisfactory (Bouchard, Pelletier, Gauthier, Cote, & Laberge, 1997; Chambless et al.). The CCQ is also based on the fear of fear (FOF) model and contains two factors that measure maladaptive thoughts about the possible consequences of panic. The CCQ was constructed for measuring emotional, physical, mental, social, and bodily catastrophes. This questionnaire is based on danger themes rather than fear.

Both questionnaires have limitations for use. First, both questionnaires address only the catastrophic elements of agoraphobia. However, the assessment of more general negative (avoidance/escape, emotion-oriented) thoughts, next to catastrophic statements, seems to be a better reflection of the thoughts patients have during therapy. Another limitation of the ACQ and CCQ is that they focus exclusively on negative (catastrophic) cognitions and thereby neglect the positive side of an individual's internal dialogue. Some authors argue that treatment is directed at changing the balance or ratio between positive and negative self-talk although the optimal ratio is still unclear (Cox, 1996).

The *Agoraphobic Self-Statements Questionnaire* (ASQ; van Hout et al., 2001) was designed to overcome some of the perceived shortcomings of previous instruments and procedures. The content of the ASQ was derived from open-ended thought listings provided by a large sample of agoraphobic outpatients in response to an in vivo agoraphobic situation. Several researchers have suggested that thought listings are useful in providing ideas for inventory construction, but a valid endorsement measure is generally preferable to a production technique. Furthermore, a paper-and-pencil measure is easier to administer *during* the treatment process and is less time-consuming than production techniques. Finally, the ASQ is easy to use and score and can be administered in real-life anxiety-provoking situations to strengthen the ecological validity by relying less on recall. The ASQ differs on at least two dimensions from the ACQ and CCQ. The first dimension is timing: The ACQ and CCQ are retrospective measures, whereas the ASQ is a concurrent measure. The second dimension concerns the focus: The ACQ and CCQ consist of questionnaire items specifically related to the (catastrophic) consequences of anxiety, whereas the ASQ consists of a broad range (e.g., avoidance and escape behavior, anticipated consequences, coping, and approach behavior) of representative self-statements typically reported in an agoraphobic situation. Another difference between the ASQ and the ACQ is the presence of negative and coping self-statements as a part of the ASQ.

4.2.6 Behavioral Assessment

Behavioral avoidance testing is a substantial addition to self-report questionnaires in the assessment of agoraphobia. Several tests have been developed and have been used in research studies such as the *Behavioral In Vivo Measure* (Emmelkamp, 1982), which consists of a previously determined route that should be walked by the patient with the following standardized instruction: "You are asked to walk a route and to return to our clinic immediately once you feel tense." The therapist records both time spent on this test as well the distance the patient has covered. High correlations (in the 1990s) have been found between this measure and scales for anxiety and avoidance. Patients can afterwards be asked to complete the ASQ to assess the cognitions they had during this task. Another behavioral test to assess agoraphobia is the *Multitask Behavioral Avoidance Test* (M-BAT; De Beurs, Lange, van Dyck, Blonk, & Koele, 1991), which is more time-consuming, given that it consists of three different behavioral tasks. In comparison with self-report questionnaires, the M-BAT produced a more conservative picture of gains achieved in treatment.

4.3 Etiological and Maintenance Factors

4.3.1 From Panic to Panic Disorder

Panic attacks are fairly common even in normal populations. More than half of the people report an unexpected panic attack at some point in their lives, but most individuals will not develop PD. The prevalence of nonclinical panic attacks within the last year is also high. Approximately one out of three individuals reported at least one panic attack within the last year (e.g., Norton et al., 2008). The key factor in going on to develop PD then is not only unexpected panic but rather panic-related apprehension (Telch et al., 1989). Nonclinical panickers simply go on with their lives following a panic attack with little anxiety about future attacks. On the other hand, people who meet criteria for PD worry about future attacks and their perceived consequences (panic-related apprehension).

4.3.2 Cognitive Factors

Several authors have emphasized cognitive factors in the phenomenology of PD (e.g., Beck, Emery, & Greenberg, 1985; Clark, 1986). One such factor is anxiety sensitivity. Fear of benign bodily sensations (heart rate, sweating, etc.) caused by anxiety is referred to as anxiety sensitivity or FOF (Goldstein & Chambless, 1978; Reiss et al., 1986). Many researchers have suggested that FOF is critical in the development and maintenance of PD. Many lines of research support this "Fear of Fear" hypothesis (Emmelkamp & Powers, 2009). First, studies show that early learning experiences may influence FOF development that later result in greater emotional responding to panic provocation agents. Second, prospective studies show that people high in FOF are at a greater risk for naturally occurring panic attacks. Third, patients diagnosed with PD score higher than psychiatric and nonpsychiatric controls on measures of FOF such as the Anxiety Sensitivity Index (Peterson & Reiss, 1987) and the Body Sensations Questionnaire (Chambless et al., 1984). Although anxiety sensitivity is highest in PD, it should be noted that it

is common in other anxiety disorders as well (Taylor, Koch, & McNally, 1992). Finally, several studies suggest that FOF mediates improvement in the treatment of panic patients. For example, in a study of CBT for PD, FOF fully mediated improvements in disability and partially mediated changes in agoraphobia, anxiety, and panic frequency (Smits, Powers, Cho, & Telch, 2004). Also, changes in FOF precede reduction in panic symptoms showing temporal precedence.

In summary, anxiety sensitivity figures prominently in theories of PD etiology, maintenance, and treatment. However, high anxiety sensitivity is not specific to PD and thus may not confer incremental evidence of a PD diagnosis.

4.3.3   Development of Avoidance Behavior

There is a clear need for studies addressing the issue why some individuals with panic attacks start avoiding situations while others do not. It has been suggested that the addition of agoraphobia represents a more severe form of PD. Similarly, it has been proposed that PD with agoraphobia is a two-stage disorder with stage one including PD and stage two including the addition of agoraphobia. However, a recent review found little evidence for these two hypotheses (Emmelkamp & Powers, 2009). Although panic severity does not predict agoraphobic status, other factors have substantial support including: exaggerated prediction of panic occurrence likelihood, more catastrophic cognitions about the consequences of panic, and less confidence in personal resources to manage panic (Telch et al., 1989). Of these, the patients' exaggerated likelihood estimation of panic occurrence in situations is the best predictor of agoraphobic avoidance accounting for almost 80% of the variance in avoidance behaviors (Rachman, 1994; Telch et al.).

4.3.4   Personality Traits

Specific personality traits have also been assumed to predispose individuals to agoraphobia. Agoraphobic patients have been described as dependent, shy, anxious, depressive, unassertive, immature, and the like, but there is little empirical evidence that a clear "agoraphobic personality" exists (Chambless, 1982). One of the factors increasing the risk of subsequent agoraphobic avoidance after having a panic attack may be the use of an underlying avoidant-based coping style. There are some studies to suggest that avoidant-based coping strategies are also associated with higher levels of anxious response and increased distress in response to bodily sensations (Spira, Zvolensky, Eifert, & Feldner, 2004). Indeed, in reviewing the literature, Feldner, Zvolensky, and Leen-Feldner (2004) found that patients with PD utilize more avoidance-based coping strategies when compared with controls. Another personality factor that may predispose individuals to use avoidant strategies when experiencing panic attacks might be locus of control (Emmelkamp, 1982; van der Molen, van den Hout, & Halfens, 1988).

4.3.5   Respiratory Diseases

Anxiety disorders appear to be highly prevalent among persons with respiratory diseases such as asthma (Weiser, 2007), chronic bronchitis, and chronic obstructive pulmonary disease

(COPD). The prevalence of panic attacks (25%), PD (12%), and agoraphobia (12%) was considerably higher among adults with asthma than in the general population. In addition, respiratory disturbance at age 3 was a significant classification variable for PD at age 18 or 21 (Craske, Poulton, Tsao, & Plotkin, 2001). In a large population-based study in Canada in a sample of 36,984 subjects, the prevalence of COPD/lung emphysema and chronic bronchitis was substantially higher among individuals with PD (odds ratio of 2:1 and 3:8, respectively) than in persons without PD (Patten & Williams, 2007).

Breathing-related symptoms such as dyspnoea (shortness of breath), chest tightness, or feelings of suffocation are central features of respiratory diseases. Presence of asthma, COPD, or chronic bronchitis may increase the risk of developing PD through a variety of cognitive and behavioral mechanisms, including producing threatening bodily sensations that could trigger panic among susceptible individuals. Thus, panic and associated avoidance behavior may be a conditioned response connected to an earlier aversive or traumatic experience related to asthma, chronic bronchitis, or COPD; panic attacks may be classically conditioned responses to subtle physiological changes that resemble those occurring with respiratory diseases. Such interoceptive conditioning can occur without conscious representation of learning, and it is now generally assumed that implicit emotional memories can activate amygdala-based fear systems without individuals being aware of the reasons (Craske & Waters, 2005). This interoceptive conditioning model contrasts with the catastrophic appraisal model, in which misappraisals of bodily sensations (e.g., imminent death, loss of control) are viewed as central and necessary. According to this view, symptoms of asthma, COPD, and chronic bronchitis tend to be misinterpreted and catastrophized by patients with PD as signs of impending, dire harm. The consequent symptom confusion and misinterpretations of bodily sensations lead to a positive feedback loop between anxiety and physical sensations, eventuating in full-blown panic attacks. Thus, in individuals with respiratory diseases, there is ample opportunity for interoceptive conditioning, overperception, and catastrophic interpretation of body sensations.

4.3.6 Life Events and Interpersonal Loss

Although there is some evidence that life events often precede the onset of PD, it is not clear which specific life events are associated with PD. A series of studies has studied interpersonal conflict, especially with the partner, but results of these studies are still inconclusive (Marcaurelle, Belanger, & Marchand, 2003). According to DSM-IV, PD often arises in the context of interpersonal loss (APA, 1994, p. 389). Indeed, there are now a number of studies which found that a substantial number of PD patients (ranging from one third to two thirds) experience a significant interpersonal loss in the year preceding the onset of PD (Faravelli & Pallanti, 1989; Milrod, Leon, & Shear, 2004; Pollard, Pollard, & Corn, 1989; Scocco, Barbieri, & Frank, 2007). There is some evidence that interpersonal loss might moderate treatment outcome (Klass et al., 2009).

4.3.7 Substance Abuse and Dependence

High comorbidity rates have been found both in community and clinical studies for anxiety disorders and substance abuse, especially alcohol abuse (Grant et al., 2004). In the National Comorbidity Survey (NCS) study (Kessler et al., 1997), 35.8% of males diagnosed with alcohol

dependence also met the criteria for a comorbid anxiety disorder, as opposed to 60.7% of females. In alcoholic patients seeking treatment, Schneider et al. (2001) found an overall rate of 42.3% with anxiety disorders. The most prevalent were social phobia (14%), agoraphobia (13%), and PD (5%). Substance-abusing patients with PD/agoraphobia abuse alcohol, benzodiazepines, cocaine, and cannabis, and many of these comorbid patients report a history of emotional and physical abuse (Schade et al., 2004).

PD/agoraphobia often predates alcohol- or drug-use disorders. However, in a number of cases, the risk relationship is reciprocal, with PD/agoraphobia predicting increased risk of later substance abuse, and vice versa. Many individuals endorse the belief that alcohol reduces anxiety. Secondary substance abuse may be attributed to anxiety that promotes the use of alcohol and drugs as a form of self-medication. Substance abuse as self-medication is prevalent among patients with agoraphobia. Many individuals use alcohol or drugs as self-medication, which is confirmed by studies showing peak substance use on high-stress days. Symptoms of anxiety and panic are common after heavy drinking and during withdrawal and should be distinguished from primary anxiety disorders (Emmelkamp & Vedel, 2006).

4.4   Evidence-Based Treatment Approaches

There exist a number of evidence-based interventions focusing either on panic or the agoraphobic avoidance behavior. One core element in most treatments is exposure to anxiety arousing cues. *Exposure* therapy in the case of agoraphobia consists of exposing patients to situations they fear. Exposure can be carried out in two ways: (1) in imagination, in which patients must imagine themselves to be in a fearful situation; or (2) in vivo, in which patients are actually exposed to this situation, the latter being much more effective in agoraphobia (Emmelkamp, 1982). The treatment is based on the notion that anxiety subsides through a process of habituation after a person has been exposed to a fearful situation for a prolonged period of time, without trying to escape. Considerable evidence exists, both on subjective and physiological measures, that this is indeed the case (Craske, 1999). Exposure tasks can be ordered hierarchically from low anxiety to high anxiety (gradual exposure) or patients can be confronted with the most difficult situation from the start (flooding). Exposure can be either self-controlled (i.e., patients decide for themselves when to enter a more difficult situation), or controlled by the therapist. The most successful programs are those carried out in vivo, during a long uninterrupted period of time (prolonged), and in which escape and avoidance of the situation are prevented (Emmelkamp, 1994, 2004). If anxious patients escape the situation that they fear, anxiety usually will subside. This escape behavior, however, will reinforce the anxiety and hence lead to further avoidance and escape behavior in the future. Therefore, in exposure programs, it is often necessary to deal with this escape behavior by response prevention, which means that the patients are no longer allowed to perform escape behavior.

Exposure in vivo is well documented in numerous randomized controlled clinical trials (see reviews and meta-analyses by Craske & Barlow, 2008; Emmelkamp, 1994, 2004; van Balkom, Nauta, & Bakker, 1995; van Balkom et al., 1997). Results of these reviews and meta-analyses are usually consistent indicating that exposure in vivo has a substantial effect size for agoraphobic symptoms. A total of 60–80% of all treated agoraphobics benefit significantly from exposure. Thus, exposure has become the gold standard treatment of agoraphobic patients.

Although prolonged exposure has been found to be superior to short exposure, this does not mean that having the opportunity to escape during exposure in vivo has detrimental effects as once thought (Craske, 1999). A treatment procedure where patients are allowed to escape the situation but have to reenter it again and again is as effective as prolonged exposure in vivo (Emmelkamp, 1982). This form of treatment can be conducted as a self-help program (Emmelkamp, 1982). Self-help exposure treatments for PD/agoraphobia can be done through a self-help book or a computer (Emmelkamp, 2005; Schneider, Mataix-Cols, Marks, & Bachofen, 2005). Although exposure therapies can be conducted as self-help programs either with instructions by a live therapist, by a computer, or by phone, there is some evidence that therapist guidance may lead to superior results (Williams & Zane, 1989). Further, self-help treatments are less effective for more severe patients and patients with comorbidity (Hecker, Losee, Roberson-Nay, & Maki, 2004).

Exposure in vivo not only leads to a reduction of anxiety and avoidance, but also to a reduction of panic attacks (Lelliott, Marks, Monteiro, Tsakiris, & Noshirvani, 1987; Michelson, Mavissakalian, & Marchione, 1988; Telch, Agras, Tayloor, Roth, & Gallen, 1985) and a reduction of negative self-statements (van Hout et al., 1994; van Hout, & Emmelkamp, 2002). The results of exposure therapy with agoraphobics are long-lasting. Follow-up reports ranging from 4 to 9 years after treatment have been published. Generally, improvements brought about by the treatment were maintained (Bakker, van Balkom, Spinhoven, Blaauw, & van Dyck, 1998; Fava et al., 2001; Gould, Otto, & Pollack, 1995; O'Sullivan & Marks, 1990). In a study by Peter, Brückner, Hand, Rohr, and Rufer (2008), a total of 40% of the patients reached a level within a normal range in 3–9 years after treatment. In two thirds of the patients, treatment outcome was stable during follow-up.

4.4.1   Exposure in Vivo Versus Cognitive Therapy

A number of studies with agoraphobics have shown that exposure in vivo is superior to cognitive therapy consisting of insight into irrational beliefs (RET) and training in incompatible positive self-statements (SIT) (Emmelkamp et al., 1978, 1986; Emmelkamp & Mersch, 1982). Current cognitive-behavioral approaches focus more directly on the panic attacks than is the case in RET and self-instructional training. A number of cognitively oriented researchers have stressed psychological factors in accounting for panic attacks (Clark, 1986; Ehlers & Margraf, 1989). In these models, it is assumed that patients misinterpret bodily sensations as a sign of a serious physical danger (e.g., a heart attack). The common element is that patients are likely to mislabel such bodily sensations and attribute them to a threatening disease and as a result may panic. Central to the cognitive conceptualization of panic is that bodily sensations are interpreted as dangerous. A positive feedback loop between physiological arousal and anxiety is postulated that leads to an ascending "spiral" ending in the full-blown panic attack.

Those formulations of panic have led to development of cognitive therapy focusing on the bodily sensations. The cognitive therapy of Clark et al. consists of explanation and discussion of the way hyperventilation induces panic, breathing exercises, interoceptive exposure, and relabeling of bodily symptoms. This package produced a substantial and rapid reduction in panic attack frequency (Clark, Salkovskis, & Chalkley, 1985; Salkovskis, Jomes, & Clark, 1986). Clark et al. (1994) compared the cognitive therapy for panic with applied relaxation and drug treatment (imipramine). All three treatments were found to be effective in reducing panic,

anxiety, and avoidance. The cognitive therapy was found to be superior to the other two treatments on 12 out of 17 measures. At a 15-month follow-up, 80% of cognitive therapy patients, 47% of applied relaxation, and 50% of imipramine patients were panic-free. Beck, Stanley, Baldwin, Deagle, and Averill (1994) found cognitive therapy more effective than relaxation and minimal contact control condition in panic patients with mild or moderate agoraphobia.

Van den Hout et al. (1994) evaluated the effects of cognitive therapy and exposure in vivo in patients with PD and agoraphobia. Half of the patients received four sessions of cognitive therapy, followed by eight sessions of cognitive therapy plus exposure. In the other condition, the first four sessions consisted of supportive therapy in order to control for therapist attention. As expected, cognitive therapy led to a reduction of panic attacks, whereas panic was not affected by supportive therapy. However, on all other measures, i.e., Fear Questionnaire, Behavioral Avoidance Test, Beck Depression Inventory and measures of FOF, and state and trait anxiety, improvement commenced *after* exposure in vivo commenced. Thus, although cognitive therapy led to a reduction in panic attacks, this did not automatically lead to an abandonment of the agoraphobic avoidance behavior. Also, Rijken, Kraaimaat, de Ruiter, and Garssen (1992), Williams and Falbo (1996), and Burke, Drummond and Johnston (1997) did not find a combination therapy more effective than exposure alone in agoraphobic patients. In contrast, two studies found cognitive therapy as effective as exposure in vivo (Bouchard, Gauthier, Laberge, French, Pelletier, & Godbout, 1996; Hoffart, 1995). However, in both studies, exposure in vivo was an essential component of the cognitive therapy, which renders the results difficult to interpret. Finally, in a study of Marchand et al. (2008), it was hypothesized that patients with moderate to severe agoraphobia receiving a combination of cognitive therapy and graded exposure in vivo would improve more than those receiving cognitive or behavioral treatment alone at 1-year follow-up. Results failed to support this hypothesis.

There is now considerable evidence that the degree of agoraphobic disability has a significant bearing on panic treatment effectiveness. In the study of Williams and Falbo (1996), 94% of low agoraphobia subjects were free of panic after treatment, while only 52% of the high agoraphobia subjects became panic-free. As noted by the authors, the findings suggest that when panic treatment research excludes people with severe agoraphobic avoidance, as it has routinely done, an overtly positive estimate of panic treatment effectiveness can result.

Taken together, there is convincing evidence that cognitive therapy dealing with misinterpretations of bodily sensations is highly effective in reducing panic attacks. However, this does not necessarily lead to a reduction of the avoidance behavior in severe agoraphobic patients. A combination of cognitive therapy and exposure in vivo is not more effective than exposure in vivo alone. Further, the role that cognitions play in cognitive therapy remains unclear (Oei, Llamas, & Devilly, 1999). Given this state of affairs, cognitive therapy (without exposure in vivo) cannot be recommended for panic patients with severe agoraphobia.

4.4.2 Interoceptive Exposure for Panic Disorder

The cognitive-behavioral treatment of PD includes interoceptive exposure, which involves inducing the feared bodily sensations associated with panic attacks through various exercises in order to reduce the fear associated with these physical sensations through habituation. These exposure exercises are designed to mimic the physiological sensations that patients experience

during panic attacks (i.e., sweating, heart palpitations, and dizziness) through assignments such as brief vigorous physical exercise, hyperventilation, and spinning.

Barlow, Craske, Cerny, and Klosko (1989) evaluated the effects of a comprehensive package consisting of exposure to interoceptive stimuli, imaginal exposure, breathing retraining, and cognitive restructuring. This package was found to be more effective than applied relaxation and no-treatment. In a second study from the same group (Klosko, Barlow, Toussinari, & Cerny, 1990), this package was found to be more effective than alprazolam and placebo. However, in a large multicenter trial (Barlow, Gorman, Shear, & Woods, 2000), this package was found to be as effective as imipramine and both active treatments were more effective than placebo. A combined treatment of CBT and imipramine was not significantly superior to CBT plus placebo. Six months after treatment discontinuation in the intent to treat analysis the response rates were 39% for CBT alone, 26.3% for CBT combined with imipramine, 19.7% for imipramine alone, and 13% for placebo.

A few studies investigated the effects of various components of a cognitive-behavioral treatment package. Craske et al. (1997) and Schmidt et al. (2000) demonstrated that interoceptive exposure is a more powerful component of CBT for PD than breathing retraining. Results of both studies revealed that breathing retraining added little to other components of the CBT intervention. Antony, Ledley, Liss, and Swinson (2006) instructed participants to complete 13 interoceptive exposure exercises and found that breathing through a very thin straw for 2 min was the most potent exposure exercise, followed by spinning around while standing for 1 min, hyperventilation for 1 min, and pressing a tongue depressor down at the back of the tongue for 30 s.

4.4.3   CBT and Comorbid Substance Abuse and Dependence

In the case of comorbid substance abuse or dependence, the task of the clinician is to determine the temporal relationship between the syndromes identified. For example, panic attacks are often associated with withdrawal syndromes. The course of the disorders can usually be established retrospectively, for example by using the Time-Line Follow-Back interview. The association between the PD/agoraphobia and the substance-use disorder is not necessarily unidirectional, but in some cases a vicious cycle exists. Research in this area is scarce and provides little in the way of clinical guidelines. Research has primarily focused on alcohol abuse and dependence. Although it has been claimed that comorbid anxiety disorders predict poor outcome of alcoholism treatment, results are inconclusive given the many methodological problems in most studies (Emmelkamp & Vedel, 2006). In cases where PD/agoraphobia precedes development of substance abuse; it has been suggested that many patients may ingest alcohol or drugs as self-medication to cope with the psychiatric symptoms. Would a combination of cognitive-behavior strategies focusing on both the PD/agoraphobia and substance abuse enhance treatment effects? Unfortunately, the results of the few studies that investigated whether dual treatments focusing both on the alcohol dependence as well as on PD/agoraphobia are more effective than treatment focusing on either disorder on its own are negative. Bowen, D'Arcy, Keegan, and Van Senthilsel (2000) evaluated whether a cognitive-behavioral treatment for PD and agoraphobia would enhance the effects of the regular alcoholism program in alcohol-dependent inpatients with comorbid PD. Unfortunately, the addition of 12 h of cognitive-behavioral therapy directed at panic and agoraphobia led neither to enhanced outcome on

drinking measures nor on mood and anxiety symptoms. In a study by Schadé et al. (2005), patients with a primary diagnosis of alcohol dependence and a comorbid anxiety disorder involving agoraphobia or social phobia were randomly assigned to an intensive psychosocial relapse-prevention program on its own, or in combination with an anxiety treatment program comprising cognitive-behavioral therapy and optional pharmacotherapy (selective serotonin reuptake inhibitors). The addition to the treatment directed at anxiety neither enhanced treatment outcome in terms of abstinence or a reduction in days of heavy drinking, nor reduced relapse. The additional therapy reduced the anxiety symptoms, but it had no significant effect on the outcome of alcohol treatment programs.

Since there is considerable evidence that substance abuse may perpetuate or exacerbate anxiety symptoms, it is therapeutically wise to wait and see what happens with the anxiety symptoms when the substance use is stopped or substantially reduced. Generally, cognitive-behavior therapy targeting the substance abuse is not only likely to result in a reduction of substance use but in a reduction of anxiety symptoms as well; so, within the perspective of a stepped-care approach, in most cases treatment should be directed at the substance abuse first (Emmelkamp & Vedel, 2006). If the anxiety symptoms remain prevalent after a period of at least 4 weeks of abstinence, there is reason to consider more detailed assessment and treatment directed toward PD/agoraphobia. If anxiety does not improve after reduction of substance abuse, adding treatment components directly addressing the anxiety disorder might be indicated.

4.4.4 Effect of Personality Disorders

Comorbid personality disorders are common in patients with anxiety disorders, with the avoidant and dependent PDs being most frequent (Emmelkamp & Kamphuis, 2007). The American Psychiatric Association (APA) practice guidelines for PD recommends psychodynamic psychotherapy for PD patients with comorbid personality disorders. No data underlie this recommendation. Although there is some evidence that some personality traits are associated with poorer outcome in CBT, there is no evidence that the presence of personality disorders per se results in poorer outcome when personality disorder diagnosis is formally established with a structured interview (Emmelkamp & Kamphuis).

4.4.5 CBT: The Role of the Therapist

There is some evidence that cognitive-behavior therapy can be applied with reduced therapist contact (Cote, Gauthier, Laberge, & Cormier, 1994), or can be conducted by competent nurse-therapists (Kingdon, Tyrer, Seivewright, Ferguson, & Murphy, 1996). Results with respect to the efficacy of bibliotherapy are inconclusive (Fanner & Urquhartt, 2008). One study found that telephone-based collaborative care for PD and generalized anxiety disorder is more effective than usual care in terms of anxiety reduction (Rollman, Belnap, & Mazumdar, 2005). Another study found that a telephone-based behavior therapy program was an effective treatment for people with PD and agoraphobia (Swinson, Fergus, Cox, & Wickwire, 1995).

More recently, a number of studies have shown that CBT can also be delivered through the Internet (Carlbring et al., 2006; Emmelkamp, 2005; Klein, Richards, & Austin, 2006). For example, in a study in Australia (Kiropoulos et al., 2008), an Internet-based CBT intervention was

compared to best-practice face-to-face CBT for people with PD with or without agoraphobia. Effects of the Internet-based CBT program were found to be comparable to those of face-to-face CBT in terms of reductions in panic attacks and avoidance behavior, depressed mood and panic-related cognitions. Participants rated both treatment conditions as equally credible and satisfying.

4.4.6 Spouse-Aided Therapy

In anxiety disorders, two different formats of spouse-aided therapy can be distinguished.

In *partner-assisted exposure* the partner accompanies the patient to each treatment session. The couple receive a treatment rational in which the focus is on exposing the patient to phobic situations. The partner can assist in making a hierarchy consisting of gradually more difficult exposure tasks. At each session, the patients are given a number of exposure homework assignments. The role of the partner is to stimulate the patient to do these exercises, help in confronting the phobic situations, accompany the patient if necessary, and reinforce the patient in mastering these exposure exercises successfully. Thus, treatment focuses on the phobia. Relationship problems, if any, are not discussed.

Other spouse-aided approaches in anxiety disorders have focused on interpersonal difficulties thought to maintain agoraphobic symptoms. These approaches include *communication training* and *partner-assisted problem solving* directed either at phobia-related conflicts or at general life stresses and problems.

In contrast to expectations derived from general systems theory, there is no evidence that exposure therapy of the patient with agoraphobia has adverse effects on the relationship or the partners' symptoms. The controlled studies in this area concur that the relationship remains stable or slightly improves, with no exacerbation of symptoms in the partner or the patient. Thus, the system-theoretic conceptualization of anxiety disorders being a symptom of more serious marital problems is not supported by the empirical evidence (Emmelkamp & Gerlsma, 1994; Marcaurelle et al., 2003).

Studies investigating the effects of spouse-aided therapy in individuals with agoraphobia led to conflicting results. Most studies have evaluated the effects of partner-assisted exposure. In two studies (Cobb et al., 1984; Emmelkamp et al., 1992), spouse-aided exposure therapy was found to be no more effective than treatment of the patient alone. In contrast, one study (Cerny, Barlow, Craske, & Himadi, 1987) found superiority for the spouse-aided exposure condition, when compared to a non-spouse group on measures of agoraphobia. However, this study has a number of methodological problems which make the results difficult to interpret. Taken together, the results of studies that have been conducted so far indicate that there is no need to include the spouse in the exposure treatment of agoraphobics.

The results of studies that evaluated the efficacy of interpersonal skills training interventions are rather mixed, so no general conclusions are allowed. Treatment focusing on general life stress rather than on relationship difficulties was found to be less effective than exposure by the patient alone. In contrast, studies that focused on relationship issues in addition to exposure led to slightly better results, especially at follow-up. Notably, this was also the case in couples who were not maritally distressed. Given the finding that criticism of the spouse may be related to relapse at follow-up, this may require specific attention to communication training in couples with a critical partner (Emmelkamp & Vedel, 2002).

4.4.7 CBT Versus Other Psychotherapies

Few studies have evaluated the effects of psychotherapies other than cognitive-behavior therapy in patients with PD with or without agoraphobia. Van den Hout et al. (1994) found cognitive therapy more effective than supportive psychotherapy in reduction of panic attacks. Further, Craske, Maidenberg, and Bystritsky (1995) found a cognitive-behavior therapy package more effective than nondirective psychotherapy. In both studies, treatment involved only four sessions. Hoffart and Martinsen (1990) compared two inpatient programs in agoraphobics: (1) psychodynamic therapy and (2) exposure plus psychodynamic therapy. Only the integrated therapy resulted in stable improvements. Given a number of methodological problems including lack of randomization and lack of behavioral measures, the results are difficult to interpret.

Teusch, Böhme, and Gatspar (1997) compared two inpatients programs: (1) client-centered therapy and (2) exposure in vivo plus client-centered therapy. Both treatment formats led to significant reductions in panic, avoidance, and depressive symptoms. The combined treatment was superior to client-centered therapy on readiness to expose oneself actively to phobic situations at discharge and at a 6-month follow-up, reduction in agoraphobia at a 3-month follow-up, and general anxiety at a 6-month follow-up. Unfortunately, an exposure only condition was not included in the design, thus precluding conclusions with respect to the additive effect of client-centered therapy to exposure in vivo.

Two studies compared cognitive therapy with another psychotherapy in patients with PD without severe agoraphobia. Beck, Sokol, Clark, Berschick, and Wright (1992) compared cognitive therapy with client-centered supportive therapy. After 8 weeks, 71% of the patients in the cognitive therapy condition were panic-free in contrast to 25% of the patients who had received nondirective therapy. Shear, Pilkonis, Cloitre, and Leon (1994) compared cognitive therapy with "nonprescriptive treatment" in patients with PD. This nonprescriptive treatment included psychodynamic elements. In this study, cognitive therapy was not found to be superior to this nonprescriptive treatment.

More recently, panic-focused psychodynamic therapy was found to be equally effective as applied relaxation in patients with PD (Milrod et al., 2007). However, subjects in panic-focused psychodynamic psychotherapy had significantly greater reduction in severity of panic symptoms. Unfortunately, panic-focused psychodynamic therapy has not been compared with the state-of-the-art CBT, which has been found consistently superior to applied relaxation (Arntz & van den Hout, 1996; Barlow et al., 1989; Beck et al., 1994; Clark et al., 1994; Craske, Brown, & Barlow, 1991).

In sum, rather few controlled studies support the effects of other psychotherapies than cognitive-behavioral therapy for PD with or without agoraphobia. Unfortunately, due to methodological problems (e.g., few sessions, concurrent inpatient treatment, lack of randomization), results with respect to the effects of alternative psychotherapies are inconclusive.

4.4.8 CBT and Pharmacotherapy

Many studies have been reported that investigated the relative contribution of cognitive-behavioral procedures and psychopharmaca, which would be difficult to discuss in any detail. Different classes of drugs have been investigated, including antidepressants (Trycyclic

Anti-Depressants [TCAs] and Selective serotonin reuptake inhibitors [SSRIs]) (high-potency) benzodiazepines, and cognitive enhancers.

Antidepressants have been demonstrated to be effective in preventing panic attacks, and improving anticipatory anxiety and avoidance behavior. In a recent meta-analysis, Furukawa, Watanabe, and Churchill (2007) investigated the relative effectiveness of CBT, antidepressants, and the combination of both treatment approaches. In the acute phase treatment, the combined therapy was superior to antidepressant pharmacotherapy or CBT. The combined therapy led to more dropouts due to side effects than CBT. After termination of the active treatment, the combined therapy was as effective as CBT and more effective than antidepressants alone. Thus, results of this meta-analysis suggest that either combined therapy or psychotherapy alone may be chosen as first-line treatment for PD with or without agoraphobia, depending on patient preference. A recent study of Marchand et al. (2008) suggest, however, that a combination of CBT and antidepressant medication is not more effective that CBT plus placebo.

High-potency benzodiazepines have been shown to display a rapid onset of antianxiety effect and have beneficial effects during the first few days of treatment and are therefore often prescribed; however, the use of benzodiazepines is associated with a number of negative side effects, including sedation, cognitive impairments, and development of dependence and tolerance. Often a rebound of panic attacks occurs during tapering off. Results of studies investigating the effects of combining CBT with benzodiazepines are mixed. Combined treatment of alprazolam and exposure or CBT results in poorer maintenance of remission of PD than CBT alone (Marks et al., 1993; Otto, Pollack, & Sabatino, 1996; Spiegel & Bruce, 1997), but can facilitate discontinuation of alprazolam therapy in patients who have been treated with alprazolam only. A recent review concluded that there is a paucity of high quality studies in this area: "Based on limited available published and unpublished data, however, the combined therapy is probably to be recommended over benzodiazepine alone for PD with agoraphobia. The combination might be superior to behavior therapy alone during the acute phase, but afterwards this trend may be reversed" (Watanabe, Churchill, & Furukawa, 2007).

A new class of drugs (cognitive enhancers) holds particular promise for the future. Examples of novel pharmacological enhancers include D-cycloserine (Vervliet, 2008), yohimbine hydrochloride (Powers, Smits, Otto, Sanders, & Emmelkamp, 2009), methylene blue (Gonzalez-Lima & Bruchey, 2004), and oxytocin (Mathew, Price, & Charney, 2008).

The most widely studied cognitive enhancer to date is D-cycloserine (DCS). DCS is a partial N-methyl-D-aspartate (NMDA) glutamate agonist. Davis et al. showed enhanced extinction in animals who were administered DCS relative to placebo (Davis, Ressler, Rothbaum, & Richardson, 2006; Falls, Miserendino, & Davis, 1992). These studies were then followed by several randomized trials in humans. Administration of DCS prior to exposure therapy enhances treatment outcome among patients with height phobia (Ressler et al., 2004), social phobia (Hofmann et al., 2006), and obsessive compulsive disorder (Kushner et al., 2007). However, no study has yet been reported on PD/agoraphobia.

Yohimbine hydrochloride is a selective alpha2-adrenergic receptor antagonist that enhances extinction learning in animals (Cain, Blouin, & Barad, 2004; Morris & Bouton, 2007). In the first study of yohimbine in humans, Powers et al. showed that yohimbine administration prior to exposure-based treatment of claustrophobic participants enhanced treatment outcome at medication-free follow-up (Powers et al., 2009). Studies are currently underway in other anxiety disorders. However, this cognitive enhancer has yet to be evaluated in patients with PD/agoraphobia.

The potential therapy-enhancing effects of methylene blue and oxytocin in human subjects should emerge shortly.

4.4.9 Benchmarking of CBT for Panic Disorder with or Without Agoraphobia

There is an ongoing debate over the extent to which results from randomized controlled trials (RCTs) of psychological treatments can be generalized to routine clinical practice. Questions that have to be addressed are whether (a) patients and therapists in RCTs are truly representative of those seen in clinical practice; and (b) whether manualized treatment is used in routine practice (Powers & Emmelkamp, 2009). In RCTs, so called efficacy studies, often a relatively homogeneous sample of patients are recruited specifically for the study, patients are randomly assigned to treatment or control groups, and therapists are trained in a specific intervention and supervised so that they will implement the intervention in a manner consistent across therapists. In contrast, in routine clinical practice, therapists who are already working in a clinical setting with patients who are routinely referred for services are used.

A number of studies have compared the typical RCTs with the so called effectiveness studies in clinical practice in order to benchmark the treatments. In a recent review of research in this area, Hunsley and Lee (2007) found that across the adult effectiveness studies most results were comparable with the efficacy-based outcome benchmarks. With respect to the treatment of PD/agoraphobia, four of seven effectiveness trials had results comparable with the benchmark, with one study having a lower improvement rate and two having a higher improvement rate. Taken together, the results of the benchmark studies suggest that the results are generalizable to routine clinical practice, but what is the level of competency needed to implement the various assessment instruments and treatment methods discussed so far? This will be discussed below.

4.5 Mechanisms of Change

4.5.1 The Process of Exposure

Exposure is usually explained in terms of habituation. Habituation refers to a decline in fear responses, particularly the physiological responses, over repeated exposures to fear-provoking stimuli. The classical habituation theory predicts that habituation would not occur if (baseline) arousal was high. Then, arousal would further increase and lead to *sensitization* (i.e., increase in fear responses after repeated exposures to fear-provoking stimuli). However, the literature revealed that a reduction instead of a further increase in psychophysiological and subjective anxiety could be expected, for instance, during exposure to high fear-provoking stimuli (e.g., flooding therapy). Recent habituation theories have been extended to accommodate these findings. These dual-process theories describe complex interactions between habituation and sensitization, in which habituation can eventually occur after exposure to high fear-provoking stimuli (van Hout & Emmelkamp, 2002).

Several studies have provided supportive evidence for the role of habituation in exposure therapy, self-reported fear and physiological arousal showing a declining trend across exposures, consistent with habituation (van Hout, Emmelkamp, & Scholing, 1994).

4.5.2 Cognitive Change Models

The success of exposure in vivo has also been explained by the acquisition of fresh, disconfir-matory evidence, which weakens the catastrophic cognitions. From this perspective, exposure is viewed as a critical intervention through which catastrophic cognitions may be tested. This is in line with the cognitive-behavioral therapy (CBT) based on the perceived danger theory according to Beck et al. Within this model, exposure (i.e., behavioral experiments) is generally regarded as a necessity for testing the validity of dysfunctional thoughts next to other strategies such as Socratic questioning of probabilities.

Several process studies have been performed looking into the cognitive processes of exposure in vivo. In these process studies, thoughts are generally collected by means of in vivo assessment (e.g., thoughts are reported into a tape recorder) during exposure, or using thought listings (i.e., free report of all thoughts on paper) directly following exposure. In general, incon-sistent findings are reported in these process studies designed to measure the relationship between cognitive change and improvement during in vivo exposure in phobic patients (van Hout & Emmelkamp, 2002).

More consistent results were found in a process study using a short self-report question-naire to measure the frequency of thoughts during exposure in vivo. Results showed that cog-nitive change (decrease in frequency of negative self-statements) was achieved by exposure in vivo therapy. However, cognitive change per se was not related to a positive treatment outcome. The results suggested that the magnitude of the frequency ratings of negative self-statements at the start, during, and at the end of exposure therapy was the most critical factor. The most improved patients reported overall less negative thoughts (van Hout et al., 1994). Clinicians hold that cognitive avoidance during exposure is detrimental to its effects. Distraction is one of the safety measures used by phobic patients with a disorder. As predicted by the emotional processing theory of Foa and Kozak (1986), a number of studies have shown that distraction during exposure inhibits habituation, but results are inconclusive (Craske, 1999; Kamphuis & Telch, 2000; Mohlman & Zinbarg, 2000; Penfold & Page, 1999). The results of these studies are difficult to interpret due to different populations studied and distracters used.

Next, we turn to a discussion of basic and expert competencies in the treatment of PD/agoraphobia.

4.6 Basic Competencies of the Clinician

Basic competency in treating PD with or without agoraphobia should include accurate diagno-sis, comprehensive assessment, and facility with the treatment protocol.

4.6.1 Diagnosis

As in the case of any mental disorder, accurate diagnosis is the first step in professional treatment. This may be accomplished in two primary steps. First, the clinician should have a firm under-standing of the conceptual model of PD and the reasons behind the diagnostic criteria. This will only be reviewed briefly here, as it is covered earlier in the chapter. Second, the clinician should be skilled at using the tools for assessing the diagnostic criteria (semi-structured interviews).

Panic attacks were at the heart of the early models of PD. However, it became obvious that although panic attacks were necessary, they were not sufficient to explain the maintenance of PD. For example, some treatments (psychological and pharmacological) readily eliminate the occurrence of panic attacks, and yet these patients often continue to report significant impairment. In addition, panic attacks and anxiety sensitivity are common in all anxiety disorders (Taylor et al., 1992). As mentioned earlier, approximately 50% of the general population report experiencing an unexpected panic attack at some point in their lives. What appears to truly differentiate PD patients from those who have had panic attacks but not the disorder is the development of panic-related apprehension. Thus, the current DSM-IV-TR still includes more than one unexpected panic attack as the first criterion, but it goes on to emphasize there must be a month or more of panic-related apprehension defined by three categories including: (1) fear of future attacks, (2) fear of the consequences of attacks, and (3) several types of avoidance behavior. The feared consequences are further broken into physical, social, loss of control, or functional impairment categories. Panic-related apprehension will be discussed further below as part of the assessment section, but the clinician should be aware of each category even during the diagnostic interview. Once the clinician determines that the patient has had more than one unexpected panic attack and a month or more of panic-related apprehension, differential diagnosis may arise. Comorbidity is common in PD and basic competency should include the ability to accurately differentiate panic and related disorders. Key questions the clinician should be able to answer include: (1) if the patient never had a panic attack again, would they still have anxiety? (2) if they meet the criteria for multiple disorders which one is primary (earliest onset)? and (3) which disorder is principal (causes the most impairment)? It is important to remember that disorder onset occurs only when symptoms significantly interfere with life and activities. Therefore, the date of PD onset is when the panic-related apprehension began to cause significant impairment – not at the time of the first panic attack. Once the clinician masters the model of PD, then semi-structured interviews and measures can guide the assessment process.

4.6.2 Assessment

The assessment of PD can guide treatment planning and monitor outcome. The process should be viewed as an ongoing activity throughout treatment. A competent clinician should be skilled with both diagnostic and subject distress measures. The most common and accurate diagnostic tools include the Structured Clinical Interview for DSM-IV Disorders – SCID (First, Spitzer, & Gibbon, 1994), the Composite International Diagnostic Interview – CIDI (WHO, 1997), the Mini-International Neuropsychiatric Interview – MINI (Sheehan et al., 1998), and the Anxiety Disorders Interview Schedule Adult Version – ADIS-IV (Brown, DiNardo, & Barlow, 2004). These interviews are the most common diagnostic tools used in expert PD treatment and research centers. Although these instruments may guide the diagnostic process, they should not replace the ability of the clinician to know the reason behind each question. Basic competency will be demonstrated by striking a balance between delivering the questions in a reliable manner while also using targeted probing questions as needed. The ability of the clinician to accurately diagnose patient may be accessed through close supervision particularly on the first couple of cases.

Once the diagnosis is made, the clinician should be able to determine the severity and maintaining factors of each case. The competent clinician should be able to use these measures to focus treatment. Again, tools are available to guide this assessment that was covered above. Severity of PD is most often measured with the PD Severity Scale – PDSS (Shear et al., 1997). This interviewer-administered scale was modeled after the Yale Brown Obsessive Compulsive Scale for Obsessive Compulsive Disorder (OCD). Competency with the PDSS should be measured by interrater reliability. As mentioned earlier, anxiety sensitivity appears to mediate treatment response to CBT (Smits et al., 2004). Therefore, it is crucial to measure anxiety sensitivity throughout treatment. The most common measure for anxiety sensitivity is the Anxiety Sensitivity Index – ASI (Peterson & Reiss, 1987). In addition, the Panic Appraisal Inventory may be used to further assess treatment targets (Telch, 1987). The panic appraisal inventory includes three subscales that assess: (a) anticipated panic, (b) perceived consequences of panic, and (c) perceived self-efficacy in coping with panic. The perceived consequences subscale can be particularly useful in assessing which consequences the patient fears the most. This scale shows the relative distribution of threat associated with physical, social, and loss of control consequences. The therapist should also be familiar with the Beck Depression Inventory – BDI (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). In particular, the clinician should regularly monitor items two and nine as they are associated with suicide risk. Finally, interoceptive assessment should guide the application of interoceptive exposure. This assessment should take place later during treatment and thus will be discussed below.

In addition to administration and scoring, the clinician should be able to interpret the scores. Basic competency should include knowledge of the norms for people with PD and for healthy controls. Basic competency also includes the ability of the clinician to incorporate the findings of these measures into informed treatment decisions.

Basic competency in the treatment of PD should also include an awareness of the treatment of PD NIH consensus statement (NIH, 1991, 1992, 1993). Experts from around the world converged to create a consensus statement on all that was known at that time about the proper treatment of PD. As this statement is now almost 20 years old, the conclusions are out of date but clinicians should still be aware of the major findings. The NIH (1991) consensus panel stated:

▶ Panic disorder is a distinct condition with a specific presentation, course, and positive family history and for which there are effective pharmacologic and cognitive-behavioral treatments. Treatment that fails to produce benefit within 6–8 weeks should be reassessed. Patients with panic disorder often have one or more comorbid conditions that require careful assessment and treatment. The most critical research needs are: the development of reliable, valid, and standard measures of assessment and outcome; the identification of optimal choices and structuring of treatments designed to meet the varying individual needs of patients; and the implementation of basic research to define the nature of the disorder. Barriers to treatment include awareness, accessibility, and affordability. An aggressive educational campaign to increase awareness of these issues should be mounted for clinicians, patients and their families, the media, and the general public.

The statement was general but emphasized the time-limited nature of effective treatments. In 1998, there was another international consensus group charged with the goal of providing

primary care clinicians with recommendations in the treatment of PD (Ballenger et al., 1998). Again, as the statement is over 10 years old now, the findings are out of date. In addition, the statement focused on pharmacotherapy. They recommended using SSRIs as first-line treatment for a period of 12–24 months. They went on to suggest a slow taper over 4–6 months when discontinuing medication. Basic competencies should also include awareness of pharmacologic strategies to deal with PD, covered briefly above. Clinicians should be informed about the pros and cons of antidepressant medication and high-potency benzodiazepines in the treatment of PD.

4.6.3 Treatment

After diagnosis and assessment, the first step in treatment is psychoeducation. Competence in psychoeducation delivery should include broad and deep knowledge of PD. This phase is primarily didactic and is crucial for building rapport. The material for psychoeducation is available in any treatment manual, but the clinician should be able to deliver the information from memory, assisted by only an outline. This will increase the credibility of the therapist and the treatment. Although this phase is primarily didactic, a skilled therapist will follow each knowledge piece with brief solicitation from the patient on how it relates to them.

Second, the therapist initiates self-monitoring. Various forms may be used but most include daily monitoring of anxiety, panic, and associated specific threat forecasts. The best way for a therapist to become skilled at initiating self-monitoring is to try it themselves. Therapists should try monitoring themselves for at least 1 week prior to trying this with a patient. Therapists should go over these forms with patients in each session and demonstrate that intervention is tied to these ongoing assessments. Also during this phase, many manuals include breathing retraining. However, this may be omitted (Schmidt et al., 2000).

Third, the therapist should be able to conduct interoceptive assessment and associated exposures. The therapist should be able to complete each of the interoceptive tasks themselves without any anxiety prior to conducting this assessment with a patient. Next, the therapist should be able to tolerate making the patient anxious during the assessment and subsequent repeated exposures. The therapist should be skilled with the full spectrum of interoceptive exposure techniques including: head shaking, spinning, push ups, stair climbing, running in place, gag reflex, breath holding, straw breathing, head between the legs, hyperventilation, CO_2 inhalations, caffeine challenges, niacin challenges, and yohimbine challenges. To demonstrate competence, a clinician should either conduct interoceptive or in vivo exposure in every session once psychoeducation has ended. In addition, the clinician should demonstrate competent exposure execution. In short, exposure should be conducted in vivo when possible in a graduated fashion (to reduce dropouts). Long massed continuous exposures are preferred over short interrupted spaced trials. Finally, attention to what is learned is critical. Although massed exposures may be preferable for acute outcome, spaced exposures may reduce relapse. Therefore, an expanding spaced schedule may be optimal (Rowe & Craske, 1998; Tsao & Craske, 2000).

Fourth, in vivo exposure is initiated to address avoidance behavior. These exercises are most effective when the therapist conducts the exposure with the patient at first. The therapist should expect to leave the therapy office for these exposures and may need to work with their clinical setting to obtain the necessary approval to do so. Effective PD treatment is very active, and a competent therapist should demonstrate willingness to get out of the office with the patient when indicated.

Fifth, all of these steps should be supplemented with attention to fading of the use of safety behaviors. Safety behaviors include actions (mental or physical) that the patient engages in to prevent feared outcomes. Safety behaviors are also often referred to as safety signals or conditioned inhibitors in the translational research literature. If the threats are false alarms (as in the case of PD), safety behaviors have the effect of reducing anxiety in the short run but maintaining fear in the long run. If the threat is a true alarm, then obviously the safety behavior should not be eliminated. Examples of safety behaviors include carrying water, cell phones, defibrillators, medications, the presence of another person, wearing a seat belt, and mentally counting to avoid thinking of something (Barlow, 1988). All types of avoidance may also be considered safety behaviors, but the reverse is not true. As can be seen, safety behaviors are not necessarily good or bad. The important questions are: (a) why is the patient engaging in the behavior? and (b) if the behavior is to prevent a feared outcome, is the outcome a true or false alarm? For example, wearing a seat belt would be considered an adaptive safety behavior, whereas, carrying a defibrillator may be maladaptive for a physically healthy panic patient with cardiac concerns. Studies show that the use or even availability of safety behaviors during treatment may lead to poorer outcome when later tested without availability of the safety aids (Powers, Smits, & Telch, 2004). Conversely, asking patients to refrain from safety behaviors leads to superior outcome (Salkovskis, 1991; Wells et al., 1995). It is important to note that the use of safety behaviors during treatment is not necessarily contraindicated. In fact, if a patient will only engage in exposure with the use of a safety aid then it may be required to proceed. In this case, the safety behavior may be faded later in treatment so that the patient learns unambiguous safety. If the patient believes that he or she was safe during treatment *because* of the safety behavior then this attribution may put the patient at risk for relapse (Powers, Smits, Whitley, Bystritsky, & Telch, 2008).

Once the didactic phase of the treatment is complete, the therapist should be able to check off each of the following sessions: (a) inquiry about homework from last session, (b) going through the threat forecast forms since the last session, (c) conducting in-session interoceptive or in vivo exposure or stating a valid reason why not, and (d) assigning homework. To assess competence a supervisor should review recording from the beginning sessions (to determine competence in delivery of the rational and psychoeducation) and several recordings of later sessions with the above checklist.

4.7   Expert Clinical Competencies

It is difficult to firmly differentiate basic from expert competencies in the treatment of PD. The developmental trajectory of a clinician working with PD is surely more accurately described as a continuum. However, the portion of the continuum allocated to the expert clinician includes state-of-the-art treatment from burgeoning research. Therapists who may be described as experts should be knowledgeable and skilled at psychological and pharmacological augmentation strategies along with the ability to work with complex presentations. Most current augmentation strategies are the result of recent advances in translational research (Craske, Hermans, & Vansteenwegen, 2006; Craske et al., 2008). Early models of mechanisms of change in anxiety disorder treatment emphasized fear activation followed by fear reduction. For example, emotional processing theory suggests that for effective treatment: (a) the fear structure must be activated, and (b) evidence that is not consistent with the fear structure must be available and processed (Foa & Kozak, 1986; Foa & McNally, 1996; Rachman, 1980). The theory

suggests that fear structure activation is indexed by self-reported fear and psychophysiology. The processing of incompatible information is then theoretically indexed by within and between trial habituation. However, studies show initial fear activation (Foa et al., 1983) and within trial habituation (Kozak, Foa, & Steketee, 1988) is not always associated with better outcome. In fact, studies show that CBT is effective even when exposure trials are terminated at the point at which anxiety reaches a high level – given further exposures are conducted (Emmelkamp & Mersch, 1982; Rachman, Craske, Tallman, & Solyom, 1986). More recent theories on mechanisms of change emphasize developments in laboratory models of fear acquisition and extinction.

From a translational research perspective, we may view extinction of conditioned fears as a laboratory model of exposure-based treatment of anxiety disorders (Bouton, Mineka, & Barlow, 2001; Craske et al., 2006; Davey, 1987, 1997; Eelen, Hermans, & Baeyens, 2001; Mineka, 1985). Translational research shows that extinction learning is an active process of new learning. Safety learning inhibits fear learning rather than erasing it as once thought (Bouton, 1993). Both fear and safety learning are then in competition. When confronted with the feared stimulus, this competition is resolved in favor of the memory which matches the current context best. Relevant contexts include both internal and external stimuli (therapist presence/absence, location, time, drug state, etc.). In a clinical setting, this means that what is learned in the therapy context may not entirely translate to other contexts after treatment is over. This reemergence of fear in different contexts after exposure treatment comes in several forms including spontaneous recovery, renewal, reinstatement, and rapid reacquisition. First, time may be considered a context. Thus, it is possible to observe a return of conditioned responding after extinction simply with the passage of time. This circumstance is called spontaneous recovery (Baum, 1988). Second, renewal is when the subject is presented with the extinguished Conditioned Stimulus (CS) in any context other than the extinction context and conditioned responding returns (Bouton). Third, reinstatement is observed when conditioned responding reemerges in response to an unsignaled Unconditioned Stimulus (US) (Rescorla & Heth, 1975). Finally, rapid reacquisition occurs when the CS–US relationship is learned faster after acquisition and extinction trials than in naive subjects who never learned the CS–US relationship (Ricker & Bouton, 1996). With these findings in mind, several augmentation strategies have emerged. Below we outline current expert competency areas. These methods are considered state of the art. However, "state of the art" is a moving target, and thus expert clinicians should be aware of the latest developments as they emerge. For example, for some time fading safety behaviors was considered an expert competency, while now it is a mainstream skill.

4.7.1 Augmentation (Psychological)

Taking into account what has been learned from translational research, several exposure modifications should be considered.

4.7.2 Extinction in Multiple Contexts

As extinction learning appears to be context-specific, one strategy to increase the durability of treatment is to conduct exposure in multiple contexts (Chelonis, Calton, Hart, & Schachtman,

1999; Gunther, Denniston, & Miller, 1998; Vansteenwegen et al., 2007). For example, Gunther et al. (1998) found more durable extinction in rats that received extinction in three contexts compared to those that had received extinction in only one context. Similarly, in a taste aversion study with rats, Chelonis et al. (1999) found that extinction in three different contexts reduced later renewal. These findings were also then replicated with human participants. Vansteenwegen et al. (2007) found multiple context extinction superior to single context extinction among spider phobics.

4.7.3   Occasional Reinforced Extinction Trials

Another recent finding in the animal literature is that occasional reinforced trials during extinction can slow rapid reacquisition (Bouton, Woods, & Pineno, 2004). From this perspective, if there are no US presentations during extinction, and if the subject encounters even one US presentation during follow-up testing that fearful responding should return as it signals acquisition trials. Conversely, if occasional US presentations occur during extinction, then occasional encounters with the US at follow-up testing signals both acquisition and extinction resulting in less return of fearful responding. As in the case of the most recent studies, the results suggest that occasional anxiety during exposure treatment may be beneficial in long-term outcome.

4.7.4   Mental Reinstatement

Mental reinstatement refers to having a patient mentally reinstate the treatment context when encountering the fear stimulus in a novel context. In the first examination of this strategy by Mystkowski, Craske, Echiverri, and Labus (2006), 48 spider fearful participants received exposure-based treatment in one of two contexts. At a 1-week follow-up they were tested in either the same or different context. Participants were randomized to either mentally reinstate the treatment context or a neutral context. Mental reinstatement of the treatment context included instructions to "[r]emember what happened and what you learned last time, and where all of that took place." The neutral condition was instructed to "[p]lease remember all of the things that you do to get ready in the morning before leaving for school or work." Consistent with prediction, results showed that the mental reinstatement of the treatment context lead to significantly less return of fear (Mystkowski et al., 2006).

4.7.5   Fear Antagonistic Action Strategies

Telch et al. reasoned that if safety behaviors can interfere with long-term treatment efficacy, then engaging in actions in direct opposition to the fear action tendencies may enhance outcome. Indeed an initial randomized controlled trial of 88 acrophobics showed that fear antagonistic actions enhanced treatment outcome (Wolitzky & Telch, 2009). Examples of fear antagonistic action strategies include running toward the railing while conducting a height exposure on a landing, walking backward to the railing, and putting hands behind the back. Participants were randomized to exposure with oppositional actions, exposure only, psychological placebo treatment, or a wait list. The fear antagonistic action condition showed greater fear reduction

compared to the other groups at posttreatment and follow-up. In addition, the oppositional action group showed greater generalization of fear reduction to an untrained test context.

4.7.6 Eliminating External Attributions

Most patients seeking help for anxiety are already taking medication when they arrive for treatment (Roy-Byrne et al., 2002; Taylor et al., 1989). An expert clinician should be aware of the literature on combined CBT and medication treatment (Barlow et al., 2000; Gladsjo et al., 2001; Marks et al., 1993; Sharp et al., 1996). The research to date suggests a slight advantage of combined treatment and post assessments. However, this advantage is lost at follow-up. In fact, the Barlow et al. study showed that up to half of posttreatment responders who discontinued their medication relapsed within 6 months. The detrimental effects of combined treatment on medication-free follow-up are likely due to a combination of drug context (Mystkowski, Mineka, Vernon, & Zinbarg, 2003), associative (Rescorla & Wagner, 1972), and/or attributional mechanisms (Powers et al., 2008). However, continuing exposure during medication taper may prevent later relapse. Indeed studies show CBT for PD is effective during gradual benzodiazepine taper (Hegel, Lewis Ravaris, & Ahles, 1994; Otto et al., 1993; Spiegel, Bruce, Gregg, & Nuzzarello, 1994) and SSRI discontinuation (Schmidt, Wollaway-Bickel, Trakowski, Santiago, & Vasey, 2002; Whittal, Otto, & Hong, 2001).

4.7.7 Cognitive Therapy

In the USA, the main emphasis is on interoceptive exposure to deal with PDs. In a number of cases, however, interoceptive exposure does not result in the expected cognitive changes and anxiety reduction and here a more elaborate cognitive therapy may be indicated. To deal with the underlying cognitions and schemata in treatment-resistant patients with PD requires a thorough understanding of the cognitive theory of PD and an intensive training and supervision in cognitive therapy.

4.7.8 Augmentation (Pharmacological)

Although knowledge of the effects of antidepressants and high-potency benzodiazepines belong in the domain of basic clinical competency, knowledge and application of cognitive enhancers requires expert knowledge. As discussed above, there are a number of cognitive enhancers that may facilitate learning in an exposure context, D-cycloserine and Yohimbine being the most promising. Although the cognitive enhancing effects of these drugs have not yet been tested in the treatment of patients with PD and agoraphobia, results in other phobic disorders suggest that the addition of these drugs may help in treatment-resistant cases.

4.7.9 Complex Presentation

Another expert competency is knowledge and skill associated with complex clinical presentations. For example, the clinician should be able to convey the prognosis for panic patients

with comorbidity. For example, a series of studies by Tsao et al. shows reliable decreases in comorbid conditions in PD patient following treatment with CBT (Tsao, Lewin, & Craske, 1998; Tsao, Mystkowski, Zucker, & Craske, 2002; Tsao, Mystkowski, Zucker, & Craske, 2005). Similarly, comorbid personality disorders do not appear to affect the efficacy of CBT for PD (Dreessen & Arntz, 1998; Dreessen, Arntz, Luttels, & Sallaerts, 1994). In short, most PD patients will be on medication and meet criteria for at least one or the other disorder. However, treatment may proceed without much modification even with complex cases. There is evidence that complex cases may start and end higher on standardized PD measures, but the slope of improvement is not different. These data suggest that more severe cases can reach similar levels of functioning with further treatment, but in a number of instances specific expert competencies are needed.

Such expert competency includes knowledge of substance abuse and dependence and how to treat these disorders. As noted above, a substantial number of patients with PD and agoraphobia abuse substances. Substance abuse has to be adequately dealt with in order to overcome the PD and prevent relapse (Emmelkamp & Vedel, 2006).

Another expert competency is related to dealing with PD and/or agoraphobia in the context of a depressive disorder. Depressive disorders often co-occur with PD/agoraphobia and a thorough functional analysis (Emmelkamp, Bouman, & Scholing, 1993) is needed to determine whether the depression should be treated first or treatment should commence with targeting the PD first. In not too severely depressed patients, where the depressed mood is the result of the PD and agoraphobia, there is usually no need to focus the treatment on the depression: if the PD improves, the depressed mood will improve concurrently.

Finally, in a few cases PD is related to marital distress. The expert should be knowledgeable about the literature in this area, able to adequately assess the relationship between panic/agoraphobia on the one hand and the relationship distress on the other, and trained in involving the partner in treatment, either in the context of spouse-aided therapy, or in the context of communication training dealing with the presumed underlying relationship distress.

4.7.10 Cultural Issues

Finally, expert clinical competencies include appreciation for cultural issues that may be related to the presentation and maintenance of PD and agoraphobia. Explanatory models of illness refer to causal attributions of a specific episode of illness that are held by patients, their family or practitioners. Predominantly culturally shaped, these models project personal and social meaning on the illness experience, and can affect coping, treatment preferences, compliance, and therapeutic relationship. In light of the available evidence, fostering the effectiveness of mental health care requires an understanding of patients perspective through assessments of their explanatory models of illness. In a study of Ghane, Kolk, and Emmelkamp (2009), anxious patients scored higher on interpersonal, victimization, and religious/mystical causes, when interviewed by an ethnically similar interviewer, and scored higher on medical causes, when interviewed by an ethnically dissimilar interviewer. Results of this study suggest that clinicians should be aware of culture-specific panic-related beliefs. In addition, in orthodox Muslim culture, agoraphobia of females might be seen as a virtue rather than as a disorder in need of treatment. Here, it may be essential to involve the family in the treatment. Expert clinicians should be informed about the progress in culturally related issues in mental health.

Basic Competencies
Accurate diagnosis
Knowledge of the model of panic disorder
Differential diagnosis
Assessment
Diagnostic tools: SCID, MINI, CIDI, or ADIS-IV
Subjective distress measures: PDSS, ASI, PAI, BDI
Treatment
Psychoeducation
Self-monitoring
Breathing retraining
Interoceptive exposure
In vivo exposure
Safety behavior fading
Antidepressants and high-potency benzodiazepines
Expert Competencies
Augmentation (Psychological)
Extinction in multiple contexts
Occasional reinforced trials
Mental reinstatement
Fear antagonistic action strategies
Eliminating external attributions
Cognitive therapy
Augmentation (pharmacological)
D-cycloserine
Yohimbine hydrochloride
Methylene blue
Oxytocin
Complex presentation (comorbidity)
Cultural influences

4.8   Transition from Basic Competence to Expertise

There is no consensus on the correct process of attaining basic competence and transitioning to expertise in the treatment of PD. There are surely multiple paths to similar proficiency. The best path is most influenced by the context of the learner. For example, a clinician finishing internship in clinical psychology graduate school is most appropriate for a postdoctoral program where the proper training is provided. Next, we briefly outline such training assuming the

learner in this case is a seasoned clinician interested in reaching basic and/or expert competence in the treatment of PD/agoraphobia.

The most common model used to lead existing therapists to basic competency and then on expert competency is called the "Watch one, Do one, Teach one" method. The specific execution of the method varies from training site to training site. The first step is for the therapist to read a general treatment-oriented chapter such as chapter 1 in the Barlow's *Clinical Handbook of Psychological Disorders* (Barlow, 2008). Next, the therapist should read through the protocol manual they plan to use such as *Mastery of your Anxiety and Panic* (Barlow & Craske, 2007). After becoming familiar with these materials, the therapist should consider attending a workshop that covers the treatment. In our experience this takes a minimum of 1 full day and preferably would span 2–4 days. The workshop should cover the etiology and epidemiology of the disorder, research on maintaining factors, empirically supported treatments, and efficacy of data. The workshop should also include a session-by-session section complete with demonstrations or videotaped examples. After the workshop the therapist should find a way to either sit in on a couple of therapy cases or watch such therapy cases on video. At this point the therapist should be ready for their own first panic patient. The sessions should be videotaped for the purpose of supervision. The therapist and supervisor should be able to talk in person or by conference call once a week to go over the most recent session. To reach basic competence each therapist should see four complete patients under close supervision with adequate ratings of adherence (asked about homework, went over threat forecast forms, conducted exposure, assigned homework). Of these four patients at least two should have moderate to severe agoraphobia.

Expert competence usually comes with further experience with patients and training in how to train other therapists. This can be accomplished in the same manner. The therapist can attend a workshop on how to train and supervise others in the treatment and then be supervised in their supervision. In addition, to become an expert it is tantamount to keep up with the research literature in PD and agoraphobia.

4.9   Summary

This chapter has summarized the literature on assessment, maintenance, treatment, and mechanisms of change in treatment of patients with PD with or without agoraphobia. Knowledge of the burgeoning literature in this area is relevant for the development of basic and expert clinical competencies in PD/agoraphobia. The clinician should first be familiar with the diagnostic criteria for PD and agoraphobia. Knowledge of structured clinical interviews is needed to be able to formalize the diagnosis. Knowledge of self-report measures, behavioral assessment, and self-monitoring is needed to assess the quality and severity of PD and agoraphobia and evaluate progress of treatment. Further, basic competency also requires knowledge on which factors are involved in the maintenance of these disorders. In addition, basic clinical competencies should entail knowledge about psychoeducation and evidence-based protocols for conducting interoceptive exposure and exposure in vivo outside the therapist office. Expert clinical competencies may entail advanced understanding and skills of applying psychological and pharmacological procedures to augment exposure therapy, skills in enactment of cognitive therapy and couple therapy, knowledge and skills to deal with PD and agoraphobia in cases with comorbid disorders (e.g., substance abuse/dependence and depression) as well sensitivity to anxiety-related cultural factors.

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5 Obsessive Compulsive Disorder

Martin E. Franklin · Sophia Talbott

Abstract: The development of basic competence and the progression from basic to expert competence in delivering cognitive behavioral therapy (CBT) for obsessive compulsive disorder (OCD) is a complex endeavor that has rarely been the focus of discussion in the literature despite the obvious importance of the topic. In this chapter we endeavored to develop a basic set of therapist skills that range from: 1) comprehensive and yet focused assessment of core symptoms; 2) differential diagnosis from disorders that overlap OCD; 3) clinical management of the common comoridities likely to be encountered; 4) providing a clear rationale for the treatment procedures that flow logically from a neurobehavioral framework; 5) conveying the current state of the treatment literature and its implications for treatment choice; and 6) developing reliance on the conceptual model of OCD to inform treatment progression. The movement from basic competence to expert delivery of CBT for OCD requires continuing education and monitoring of the extant literature, treating a sufficiently high volume of cases to master the heterogeneity of OCD presentation, and therapists' willingness to acknowledge what they do not yet know and persistence in seeking out professional opportunities to bridge the gaps in their knowledge.

5.1 Overview

In keeping with the spirit with which this book is intended, our purpose in writing this chapter is to provide a sufficiently detailed description of obsessive compulsive disorder (OCD) and its treatment, so that practicing psychologists can learn about what in our view constitutes the requisite and the expert competence in assessing and treating this condition with cognitive-behavioral theory (CBT). OCD is a complex disorder that is associated with significant morbidity, comorbidity, and functional impairment across the developmental spectrum, and there are important subtleties to its evaluation and treatment that may not be immediately apparent to the novice practitioner. That said, there is a recent evidence from a relatively large case series conducted in middle Norway indicating that treatment outcomes achieved by master's-level clinicians without any prior expertise with pediatric OCD were both statistically and clinically meaningful. Interestingly, these outcomes were also comparable to what has been achieved in the context of tightly controled randomized studies of CBT conducted in the academic context under conditions that emphasized internal validity (Valderhaug, Larsson, Gotestam, & Piacentini, 2007). This is an encouraging news indeed, indicating that substantive and durable treatment outcomes can be achieved in community clinical settings with youths suffering from OCD. The study included supervision by psychologists who were knowledgeable about OCD and its treatment; these psychologists had access to one of the world's leading experts in the application of CBT to children and adolescents, Dr. John Piacentini at UCLA, and thus the generalizability of this

study's findings to treatment that does not include these key procedural elements remains to be explored. What is clear, though, is that clarifying what constitutes competent and expert delivery of CBT for OCD is a valuable and worthwhile endeavor, one which we aim to pursue here.

By way of brief review, the DSM-IV Text Revision (DSM-IV TR; American Psychiatric Association, 2000) defines OCD by the presence of recurrent obsessions and/or compulsions that interfere substantially with daily functioning. Obsessions are "persistent ideas, thoughts, impulses, or images that are experienced as intrusive and inappropriate and cause marked anxiety or distress" (p. 457). Common obsessions are repeated thoughts about contamination, causing harm to others, and doubting whether one locked the front door. Compulsions are "repetitive behaviors or mental acts the goal of which is to prevent or reduce anxiety or distress" (p. 457). Common compulsions include hand washing, checking, and counting. In order to warrant diagnosis and separate OCD from the virtually ubiquitous occasional unwanted thought and repetitive behavior reported by most individuals who are asked, obsessions and/or compulsions must be found to be of sufficient severity to cause marked distress, be time-consuming, and interfere with daily functioning. If another Axis I disorder is present, the obsessions and compulsions cannot be restricted to the content of that disorder (e.g., preoccupation with food in the presence of eating disorders).

Development of OCD is typically gradual, but acute onset has been reported in some cases. In some cases of pediatric OCD, onset is very sudden (e.g., overnight) and associated with strep infection; treatment of the infection is associated with the substantial reduction of symptoms, but recurrence of infection is again associated with symptom exacerbation (Swedo et al., 1998). This unusual presentation appears to be more common in males than females, and has come to be known as Pediatric Autoimmune Neuropsychiatric Disorders (PANDAS); when dramatic symptom onset is described, it is important that clinicians query families of pediatric OCD sufferers about strep throat infections, colds, or other illnesses in the weeks and months prior to a dramatic symptom onset. PANDAS treatment would include a round of antibiotics to treat the infection as well as the usual, empirically supported treatments for OCD that are recommended for non-PANDAS OCD (Storch et al., 2008). No research has examined strep-related onset of OCD in adults.

As is the case with many mental health problems, individuals with OCD often suffer for years before seeking treatment. Moreover, when treatment is sought, it is often difficult to access the psychosocial treatment of choice, CBT involving exposure and response prevention (EX/RP). A comprehensive review of pharmacotherapy for OCD is beyond the scope of our chapter (Franklin & Simpson, 2005). It may suffice for our purposes here though to say that while large, multisite randomized studies clearly indicate that medications that affect the serotonergic neurotransmitter system (e.g., selective serotonin reuptake inhibitors, the tricyclic antidepressant clomipramine) are efficacious for OCD for children, adolescents, and adults, their effects are far from universal or complete, and side effects prevent some patients from reaching doses likely to be efficacious. As is discussed in detail below, CBT involving EX/RP has been found to be consistently superior to various control conditions and comparable to active pharmacotherapy in some studies and superior in others; it also appears that while combined treatment afforded some advantages over monotherapy in some studies (Hohagen et al., 1998; Pediatric OCD Treatment Study Team, 2004), there are also large studies that have failed to detect such an advantage (Foa et al., 2005).

5.2 Recognition of Symptoms and Their Assessment

Individuals suffering from OCD experience intrusive, unwanted thoughts or images that generate marked distress. These obsessions are coupled with repetitive behaviors or mental acts known as compulsions, which are performed in an attempt to reduce obsessional distress and/or to prevent the occurrence of dreaded yet unrealistic outcomes (e.g., contracting HIV through casual contact). Proper recognition of these symptoms is essential for effective treatment. The goal of assessment of the OCD symptoms, specifically, is to identify specific cues that trigger the distress, avoidance behaviors, and rituals. The evaluator also needs to explore key aspects of the patients' beliefs about OCD (e.g., the degree to which the individual views the obsessions and compulsions as senseless) and their perceived consequences of refraining from rituals and avoidance. Below we discuss our approach to this evaluation of OCD in depth.

5.2.1 OCD Symptom Topography and Severity

Treatment of OCD should always begin with at least two sessions of symptom assessment and psychoeducation. In our view, this should include (1) a comprehensive evaluation of current and past OCD symptoms; (2) a review of current OCD symptom severity and associated functional impairment; and (3) an evaluation of comorbid psychopathology. The strengths of the individuals and their family should also be considered, as well as their current knowledge of OCD and its treatment, their treatment histories, and readiness to engage in a treatment that is designed specifically to be challenging. There are many self-report and clinician-administered instruments that can be used to guide assessment; we will not review these in depth here. In our clinic and in multisite clinical trials, we ask patients and/or families, depending on the age and emotional maturity of the patient since OCD can affect people across the developmental spectrum, to complete the most relevant self-report measures prior to the intake visit, and then the intake clinician reviews these materials prior to the meeting with the patient. Prominent comorbidities or other problem areas revealed through responses to these measures can then be targeted in greater detail at intake through the use of structured or semi-structured diagnostic interviews (e.g., Anxiety Disorders Interview Schedule (ADIS) or Anxiety Disorders Interview Schedule for Children (ADIS-C)). It is then crucial to document past and current OCD symptoms and current symptom severity, which we do via the clinician-administered Yale Brown Obsessive Compulsive Scale (Goodman et al., 1989a, b) or Children's Yale Brown Obsessive Compulsive Scale (CY-BOCS) (Scahill et al., 1997), again depending on the developmental level of the patient. The clinician should be aware of the implications of the Y-BOCS and CY-BOCS symptom severity score, which ranges from 0–40 (higher scores indicating greater severity); a cut score of 16 is usually sufficiently severe to warrant inclusion in treatment studies, and scores of 30 or greater are considered especially severe. This information can be used to inform treatment decisions such as CBT session frequency.

Prior to initiating the formal assessment, the evaluator should define obsessions and compulsions, using specific examples, if the patient is having difficulty in grasping the key concepts. We also let patients know about the prevalence, nature, and treatment of OCD, which may increase their willingness to disclose specific symptoms once the semi-structured interview

begins. Psychoeducation is incorporated liberally throughout the assessment, since asking the patient a series of questions about OCD symptoms may provide an opportunity to inform the patient about the nature of the disorder or to correct misinformation that he or she may have about what constitutes OCD and appropriate treatment.

5.2.2 Differential Diagnosis

The high comorbidity of OCD with other disorders, as well as the similarity between the criteria for OCD and other DSM-IV disorders, can pose diagnostic quandaries. Below, we review some of the more common diagnostic difficulties likely to confront clinicians and provide recommendations for making these difficult diagnostic judgments. For the novice clinician who is about to conduct an intake that was scheduled for OCD specifically, it is important to resist the urge to place the round peg in the square hole. Some of the conditions discussed below have formal similarity to OCD, yet misdiagnosis could lead to inadequate treatment. We encourage our clinicians to be mindful of the possibility that the information provided to the telephone screener who scheduled the intake after a very brief assessment may or may not reflect the clinical nuances of the case, and that they should remain open to the possibility that OCD is not the primary diagnosis or the proper diagnosis at all.

Obsessions Versus Depressive Rumination. The distinction between obsessions and ruminations rests primarily on thought content and on the patient's reported responses to such thoughts. Unlike obsessions, ruminations are typically pessimistic ideas about the self or the world, and content frequently shifts. Additionally, individuals who are ruminating tend not to make attempts to suppress their ruminations in the same way that individuals with OCD try to suppress obsessions with rituals or avoidance. When depression and OCD co-occur, both phenomena may be present but only obsessions should be targeted with exposure exercises. We have also found clinically that the generally pessimistic presentation of depressed patients can undermine hopefulness about improving during EX/RP, and thus these beliefs may require therapeutic intervention even though they are not obsessional per se.

Other Anxiety Disorders. OCD often co-occurs with other anxiety disorders and diagnostic criteria are sometimes similar among anxiety disorders, but the symptoms associated with each diagnosis can usually be distinguished. For example, the excessive worries characteristic of generalized anxiety disorder (GAD) may appear similar to OCD but, unlike obsessions, worries are excessive concerns about real life circumstances and are often experienced by the individual as appropriate (ego syntonic). In contrast, obsessive thinking is more likely to be unrealistic or magical and obsessions are usually experienced by the individual as inappropriate (ego dystonic). Distinguishing between OCD and GAD is most relevant when the patient exhibits no obvious compulsions, but individuals with obsessions yet no compulsions comprise only about 2% of those diagnosed with OCD (Foa et al., 1995). Hence, the clinician should be sure to query specifically about what the patient does when his or her worries occur, and should examine whether compulsions follow. Exposure to feared thoughts and situations without sufficient education about the importance of refraining from compulsions could lead to compromised outcomes, so the importance of making a detailed query of "what happens after the obsession occurs?" cannot be overstated.

In the absence of overt rituals, symptoms of specific phobias can also appear similar to OCD. For example, OCD involving excessive fears of causing harm to others and specific phobia can each result in persistent fear of driving over bridges. However, unlike an individual with this subtype of OCD, a person with a specific phobic will often feel immediate relief after exiting the bridge on those rare occasions when crossing the bridge cannot be avoided. In contrast, the individual with OCD who fears having caused a fatal accident while driving over a bridge will likely become even more anxious once he or she has exited the bridge, driven largely by the fact that he or she can no longer check to see if such an accident has occurred. Such individuals may then drive over the bridge repeatedly searching for evidence of the crime they might have committed, which provides temporary reassurance about the previous crossing but then may also give rise to having caused another accident while distracted by the checking behavior. Both individuals would report fear of driving over bridges, but the markedly different consequences of doing so and the compulsions in the latter case would clearly influence case conceptualization and treatment. For the phobic patient repeated trips over the bridge would be indicated, whereas for the OCD patient a single trip over the bridge during times perceived to be risky followed by refraining from subsequent trips that serve a checking function would be the proper route to take in CBT.

Tourette's Syndrome and Tic Disorders. In order to differentiate the stereotyped motor behaviors that characterize Tourette's Syndrome and tic disorders from compulsions, the functional relationship between these behaviors and any obsessive thoughts must be examined. Motor tics are generally experienced as involuntary and are not aimed at neutralizing distress brought about by obsessions. There is no conventional way of differentiating them from "pure" compulsions, but OCD with "pure" compulsions is extremely rare (Foa et al., 1995). As noted above, there appears to be a high rate of comorbidity between OCD and tic disorders (Pauls, Towbin, Leckman, Zahner, & Cohen, 1986); thus, both disorders may be present simultaneously in a given patient. Interestingly, recent research indicated that tics were similarly responsive to an exposure plus response prevention protocol when compared in a randomized study to habit reversal training where a competing response is used to substitute for the tic; this finding suggests that the conceptual model underlying the treatment of tics might require modification (Verdellen, Keijsers, Cath, & Hoogduin, 2004). Clearly, though, an emphasis on imaginal exposure to obsessional content would be prominent in an individual who engages in repetitive tapping behavior to prevent a specific dreaded outcome (e.g., death of child in an accident), whereas one who reported that a very formally similar tapping behavior was engaged in to reduce discomfort associated with premonitory urges (Woods, Piacentini, & Himle, 2005) would be unlikely to benefit from imaginal exposure.

Delusional Disorder and Schizophrenia. Individuals with OCD may present obsessions of delusional intensity (Kozak & Foa, 1994). Approximately 5% of OCD patients report complete conviction that their obsessions and compulsions are realistic, with an additional 20% reporting strong but not fixed conviction. Therefore, it is important to consider the diagnosis of OCD "with poor insight" even if these beliefs are very strongly held. The differentiation of delusional disorder from OCD can depend on the presence of compulsions in OCD (Eisen et al., 1998). In OCD, obsessions of delusional intensity are usually accompanied by compulsions.

It is also important to recognize that the content of obsessions in OCD may be quite bizarre, as in the delusions of schizophrenia, but bizarreness in and of itself does not preclude a diagnosis of OCD. For example, one patient seen at our center was fearful that small bits of her "essence" would be forever lost if she passed too close to public trash cans. This patient did not

report any other symptoms of formal thought disorder, such as loose associations, hallucinations, flat or grossly inappropriate affect, and thought insertion or projection. Following a course of EX/RP that focused on exercises designed to expose the patient to the loss of her "essence" (e.g., driving by the city dump), the patient's OCD symptoms were substantially reduced. On occasion patients do meet diagnostic criteria for both OCD and schizophrenia, and a dual diagnosis is appropriate under these circumstances. Importantly, EX/RP should proceed with such patients only if the associated treatment exercises do not cause exacerbations of the comorbid thought disorder symptoms.

5.2.2.1 Comorbidities

OCD commonly co-occurs with other symptoms and complaints such as depression, anxiety, phobic avoidance, and excessive worry (Karno, Golding, Sorenson, & Burnam, 1988; Rasmussen & Tsuang, 1986; Tynes, White, & Steketee, 1990). Epidemiological studies found that about 30% of individuals with OCD also met criteria for a major depressive episode (Karno et al., 1988); sleep disturbances have been found in approximately 40% of the people with OCD. Presence of depression with OCD is important in that some studies have suggested that severe depression in particular is associated with poorer CBT outcomes (Abramowitz & Foa, 2000; Steketee, Grayson, & Foa, 1987), although the mechanism by which depression affects outcome remains unclear.

Comorbidity of OCD with other anxiety disorders also appears to be substantial. Rasmussen and Tsuang (1986) reported that in a sample of OCD patients, the lifetime incidence of simple phobia was about 30%; for social phobia, 20%; and for panic disorder, 15%. A relationship of OCD with eating disorders has also been reported. About 10% of women with OCD had a history of anorexia nervosa (Kasvikis, Tsakiris, Marks, Basaglu, & Nashirvani, 1986), and over 33% of bulimics had a history of OCD (Hudson, Pope, & Yurgelun-Todd, 1987; Laessle, Kittl, Fichter, Wittchen, & Pirke, 1987).

Disorders, such as Tourette's syndrome and other tic disorders, also appear to be related to OCD. Some 20–30% of individuals with OCD reported a current or past history of tics (Pauls et al., 1986). Estimates of the comorbidity of Tourette's and OCD range from 36% to 52% (Leckman & Chittenden, 1990; Pauls et al., 1986). Also, 5–7% of OCD patients are thought to suffer from Tourette's syndrome (Rasmussen & Eisen, 1989).

The key point for the clinician to consider here is not simply to assess for the presence of comorbidity but rather to consider its treatment implications. Comorbidity is present in many if not most cases but, if the OCD is primary, then CBT targeting OCD may ensue and will likely prove effective regardless; there is also some evidence that targeting OCD in such cases can result in reductions of the nontargeted comorbid symptoms (Franklin, Abramowitz, Bux, Zoellner, & Feeny, 2002; Franklin, Abramowitz, Kozak, Levitt, & Foa, 2000). The ADIS allows the clinician to rate the severity of each diagnosis and thus make the assessment of primary diagnosis more formally; however, there is also the matter of cause and consequence to consider when making the decision as to which disorder to address. For example, patients with severe OCD and comorbid depression often report that their depression is linked to the dysfunction caused by OCD; hence, reducing OCD ought to result in a "two birds with one stone" effect. For patients who report histories of comorbid symptoms that do not appear to be functionally linked to OCD, the decision to treat OCD must be considered carefully. There are occasions when we evaluate patients in our OCD program, determine that they do indeed have

sufficient symptoms to warrant an OCD diagnosis, yet we refer for treatment of the secondary condition because we have made the determination that the OCD treatment might be compromised if the comorbid condition is not addressed first. For example, a patient with comorbid panic disorder who has difficulty traveling to the clinic for appointments might need to have the panic symptoms addressed first before the OCD treatment could be conducted without significant interruption. We encourage all clinicians to consider the data they have gathered in the evaluation process before making a judgment as to whether to recommend treatment of OCD. If they decide this is not in the patient's best interest, conveying this clearly and sensitively will also be imperative in encouraging patients to follow the clinical advice given. Less-experienced clinicians may certainly wish to consult at this important stage of the treatment process, lest they begin a treatment that may not prove effective.

5.2.3 Maintenance Factors

Much research in the past 2 decades has been devoted to examining neurobiological, neuro-chemical, genetic, and environmental factors associated with OCD. Collective findings from these studies indicate that OCD is multi-determined and that the interactions among these factors are extremely complex. That said, factors associated with etiology may or may not be the factors associated with maintenance, and the treatment outcome literature suggests that interventions that have targeted maintaining factors such as serotonin reuptake dysfunction, negative reinforcement, and dysfunctional cognition have proven to be efficacious in reducing OCD symptoms. For our purposes here, we will concentrate our review on psychological processes, although we recognize that there are biological substrates both discovered and undiscovered that underlie many of the factors we discuss below.

5.2.4 Negative Reinforcement and Two-Factor Theory

As we described above, compulsions or rituals are repetitive behaviors performed intentionally to prevent or alleviate discomfort brought about by obsessions. Mowrer's two-factor theory (1939, 1960) has been brought to bear in explaining the maintenance of OCD via the process of negative reinforcement: obsessions give rise to anxiety or distress, individuals engage in compulsions or other forms of avoidance behavior to reduce this distress, and it works, even if only eventually and temporarily. Reduction of obsessional distress provides negative reinforcement for the compulsions, i.e., the individual learns that when such distress arises again, compulsions are likely to provide relief, which then increases urges to engage in such behavior when confronted with obsessional distress down the line, which further strengthens these relationships. Accordingly, in order to maximize treatment efficacy, ritualistic behaviors, even seemingly minor ones, should be prevented. Therefore, the therapist must be able to recognize overt and covert rituals as well as more subtle forms of avoidance.

Active rituals, like passive avoidance, may be explicit (e.g., prolonged washing, repeated checks of the door, and ordering of objects) and/or subtle (e.g., wiping hands on pant legs, blinking, replacing "bad" thoughts with "good" thoughts). Because individuals with OCD may not be sufficiently well versed in the nature of compulsions nor willing completely to report on subtle compulsions lest the therapist suggest refraining from them, it is imperative for the

therapist to recognize when such forms of OCD behavior are being engaged in, and to address these key treatment issues immediately.

Naturally, individuals with OCD often attempt to avoid anxiety-provoking situations. Most passive avoidance strategies are fairly obvious (e.g., not entering public rest rooms, not preparing meals, and not taking out the trash). However, the therapist also needs to be attentive to subtle forms of avoidance such as carrying money in one's pockets to avoid opening a wallet, wearing slip-on shoes to avoid touching laces, and using drinking straws to avoid contact with a glass or a can. These kinds of avoidance behaviors might be so ingrained in a patient as to have escaped his or her attention, so querying the patient about such behaviors must be done collaboratively and in the spirit of the treatment itself, rather than confrontationally.

Although compulsive rituals are intended to reduce the distress associated with obsessions, patients sometimes report that the performance of these rituals is averse in itself. When certain compulsions become averse, some patients decrease the time they spend performing the ritual by increasing avoidance behaviors or by substituting other less time-consuming rituals. In some cases, seemingly "new" rituals may develop during the course of treatment to fill the function of those previously identified and prevented. It is important to recognize such substitutions because, even if they are less time-consuming and functionally impairing, they too serve the same negative reinforcing function described by Mowrer as did the more elaborate ritual, and thus also need to be addressed in treatment with ritual prevention. Therapists must remain alert to such shifts in ritualistic behaviors, and help patients to become alert to the possibility of such shifts as well.

5.2.5 Threat Cues

Threat cues may be either tangible objects in the environment or thoughts, images, or impulses that the person experiences. Most OCD sufferers experience fear in reaction to specific environmental cues (objects, persons, or situations); however, each patient will have his or her own unique threat cues. For example, individuals who fear contamination from toilets may differ as to whether all toilets are feared or only those open to the public. One patient may fear only the toilet itself, whereas another patient also fears bathroom floors, doorknobs, and faucets. The therapist needs to gather specific information about cues that elicit the patient's distress in order to identify the basic sources of the fear.

Anxiety and distress may also be generated by images, impulses, or abstract thoughts that the individual finds disturbing, shameful, or disgusting. Examples of such cues include impulses to stab one's child, thoughts of one's spouse injured in an accident, or images of engaging in sexual acts with religious figures. Clearly, internal threat cues may be triggered by external situations such as the sight of a knife triggering the obsession of stabbing one's child. Some patients may get distressed when experiencing certain bodily sensations, such as minor aches and pains triggering the fear of having cancer.

Identification of the basic source is important for planning the treatment program, since confronting that source will be essential for successful behavioral treatment of OCD. It is important that the therapist conducts a thorough investigation of objects, situations, and places that evoke obsessional distress for the patient at the time of presentation and at onset. Such information will help identify the source of the distress and the basic fear troubling the patient.

In many cases, patients may be reluctant to express their obsessive thoughts, either because they are ashamed of themselves or because they fear that expressing them will make the consequence more likely to occur. As with external cues, it is necessary for the therapist to recognize internal fear cues in order to understand the underlining fears.

5.2.6 Feared Consequences

Many obsessive-compulsives are afraid that something terrible will happen if they fail to perform their rituals. Some patients have clearly defined negative consequences (e.g., "I will burn in hell for all eternity if I don't neutralize this blasphemous image"), whereas others have only a vague notion of a negative consequence (e.g., bad luck). Others do not fear catastrophes at all, but report instead that they cannot tolerate the emotional distress they experience if they do not perform rituals. Data from the DSM-IV field trial indicated that approximately two thirds of OCD patients could clearly identify consequences that would follow from refraining from rituals other than emotional distress, whereas the remainder could report no such consequences (Foa et al., 1995). It is important to identify the specific details of the patient's feared consequences in order to plan an effective treatment program, since these consequences must be directly targeted in exposure and ritual prevention exercises.

5.2.7 Cognitive Factors

Salkovskis' (1985) influential cognitive analysis of OCD suggested that an exaggerated sense of responsibility and self-blame are the central themes in the obsessive-compulsive's belief system. Neutralization, in the form of behavioral or cognitive compulsions, can be understood as an attempt to reduce this sense of responsibility and prevent blame. In addition, frequently occurring thoughts regarding unacceptable actions may be perceived as equivalent to the actions themselves, so, for example, even if the person has not actually engaged in unacceptable behavior, the mere thought of doing so is equivalent to having actually done so. More specifically, Salkovskis proposed that five dysfunctional assumptions characterize obsessive-compulsives and differentiate them from persons without OCD: (1) having a thought about an action is like performing the action; (2) failing to prevent (or failing to try to prevent) harm to self or others is the same as having caused the harm in the first place; (3) responsibility is not attenuated by other factors (e.g., low probability of occurrence); (4) not neutralizing when an intrusion has occurred is similar or equivalent to seeking or wanting the harm involved in that intrusion to actually happen; (5) one should (and can) exercise control over one's thoughts(p. 579). From this work and from other cognitive conceptualizations of OCD has grown a more cognitively oriented treatment approach that aims to test and thus disconfirm mistaken OCD-related beliefs. Just as behaviorally oriented therapies often involve discussions of OCD beliefs, many of these cognitive protocols involve behavioral experiments (i.e., exposures), the point of which is to provide information that weakens this belief system, which in turn will allow patients to more successfully refrain from rituals and other forms of avoidance. Some theorists and most therapists have blended the more behavioral approaches such as two-factor theory with the contemporary views of the central role of cognition in anxiety and OCD, and emphasize that the goal of exposure is to provide disconfirmatory evidence to weaken the fear structure

(Foa & Kozak, 1985, 1986). In our hands, there is often a Socratic discussion of OCD-relevant beliefs between the therapist and the patient, yet these discussions are likely to be taking place in anticipation of an exposure, during an exposure, or after having completed an exposure. "What do you make of the fact that you had a large butcher knife in your dominant hand, were intentionally having thoughts of cutting my throat and watching me bleed out here in my office, I had my back turned to you so I couldn't prevent your assault, and yet I'm not dead yet?," is not an uncommon thread of discussion in our work with OCD patients with fears of harming others.

5.2.8   Evidence-Based Treatment Approaches

In the last 2 decades, we have witnessed a tremendous increase in the number and methodological sophistication of clinical trials designed to examine the efficacy of treatments for OCD. Indeed, development and empirical evaluation of treatments in both psychotherapy and pharmacotherapy now provide a robust evidence base for the treatment of OCD, and more recently has spanned the developmental spectrum as well. The following section will describe the approaches with the most empirical support and summarize the evidence for the efficacy of these treatments.

5.2.9   Exposure and Ritual Prevention

Since Meyer's (1966) initial positive report of the efficacy of EX/RP, many subsequent studies have indicated that most treatment completers make and maintain clinically significant gains. Randomized controlled trials (RCTs) have indicated that EX/RP is superior to a variety of control treatments, including placebo medication (Marks, Stern, Mawson, Cobb, & McDonald, 1980), relaxation (Fals-Stewart, Marks, & Schafer, 1993), and anxiety management training (Lindsay, Crino, & Andrews, 1997). Moreover, it also appears that the treatment gains following EX/RP are quite durable: Foa and Kozak (1996) reported that in 16 studies that included long-term outcome data ($N = 376$; mean follow-up interval of 29 months), 76% of completers still met treatment responder criteria. Several studies have now indicated that these encouraging findings for EX/RP are not limited to highly selected RCT samples (Franklin, Abramowitz, Kozak, Levitt, & Foa, 2000; Rothbaum & Shahar, 2000; Valderhaug et al., 2007; Warren & Thomas, 2001). Below we summarize the literature on the ingredients that comprise EX/RP in order to help clinicians decide which EX/RP components are most essential.

Exposure Versus Ritual Prevention Versus EX/RP. Foa, Steketee, Grayson, Turner, and Latimer (1984) randomly assigned patients with washing rituals to intensive treatment (15 daily 2 h sessions conducted over 3 weeks) by (1) exposure only (EX), (2) ritual prevention only (RP), or (3) their combination (EX/RP). On average, patients in each condition were found to be improved at both posttreatment and follow-up, but EX/RP was consistently superior to the single-component treatments. These findings clearly suggest that exposure and ritual prevention should be implemented concurrently; treatments that do not include both components yield inferior outcome. Therapists can convey this information to patients who are struggling with one of these two components of the treatment in an effort to encourage them to refrain from rituals more consistently or be more aggressive in planning and seeking out opportunities to do intentional exposures during and between sessions.

Addition of Imaginal Exposure. Several studies have indicated that treatment involving imaginal exposure plus in vivo exposure and ritual prevention was superior at follow-up to an in vivo exposure plus ritual prevention program that did not include imaginal exposure (Foa, Steketee, Turner, & Fischer, 1980; Steketee, Foa, & Grayson, 1982). However, some studies have failed to replicate this finding (de Araujo, Ito, Marks, & Deale, 1995). In our clinical work, we have found imaginal exposure useful for patients who report that disastrous consequences will result if they refrain from rituals. Because many of these consequences cannot be readily translated into in vivo exposure exercises (e.g., turning into another person by touching his or her belongings), imaginal exposure allows the patient an opportunity to confront these feared thoughts and images. Addition of imagery to in vivo exposure may also prevent the use of cognitive avoidance strategies by those who try intentionally not to consider the consequences of exposure while confronting feared situations in vivo. In sum, although the data do not show that imaginal exposure is essential for achieving good acute outcomes, it may enhance long-term maintenance of gains and can be used adjunctively for patients with disastrous consequences. For patients who only report extreme distress as a consequence to refraining from rituals and avoidance behaviors, imaginal exposure may be superfluous.

Gradual Versus Abrupt Exposures. Although group differences in OCD symptom reduction were not found for patients who confronted the most distressing situations from the start of therapy and those who confronted less distressing situations first, yet patients preferred the more gradual approach (Hodgson, Rachman, & Marks, 1972); we still recommend that therapists conduct this treatment hierarchically. Patient engagement in treatment is essential in EX/RP, and thus situations of mild to moderate difficulty are confronted first, followed by several intermediate steps before the most distressing exposures are accomplished. It is important that the therapist emphasizes that exposure will proceed at a pace that is acceptable to the patient, and that no exposure will ever be attempted without the patient's prior approval. This approach should not be confused with setting a low bar for climbing the stimulus hierarchy, however: indeed, it is preferable to confront the highest item on the treatment hierarchy as soon as feasible (e.g., within the first week of intensive treatment) to allow for sufficient time to repeat these difficult exposures over the latter sessions.

Duration of Exposure. Duration of exposure was once believed to be important for outcome in that prolonged continuous exposure was found more effective than short interrupted exposure (Rabavilas, Boulougouris, & Perissaki, 1976). Indeed, reduction in anxiety (habituation) across sessions has been associated with improvement following exposure-based treatments for OCD and for PTSD (Jaycox, Foa, & Morral, 1998; Kozak, Foa, & Steketee, 1988; van Minnen & Hagenaars, 2002). However, there are several studies that have not found a strong relationship between within-session habituation and fear and symptom reduction (Jaycox et al., 1998; Kozak et al., 1988; Mathews, Johnston, Shaw, & Gelder, 1974; Rowe & Craske, 1998). Foa, Huppert, and Cahill (2006) suggested that this observation is not inconsistent with emotional processing theory because the proposed mechanism underlying symptom reduction is the modification of the relevant erroneous associations through disconfirming information, not through habituation per se. Accordingly, therapists should be clear to instruct patients that they should attempt to persist with exposure until the associated anxiety is substantially reduced, the more important factor in achieving good outcome is repeating the same exposures so as to promote reduction of associated anxiety over time. OCD patients might be particularly vulnerable to fears of ending exposures "too soon" and hence doing the treatment incorrectly, so this new instruction might help encourage patients

to go about their business without ritualizing or avoiding regardless of whether anxiety still lingers on from an exposure task.

Session Frequency. Intensive exposure therapy typically involves daily sessions over the course of approximately 1 month, but good outcomes have also been found with more widely spaced sessions (Abramowitz, Foa, & Franklin, 2003; de Araujo et al., 1995; Franklin et al., 1998). A recent RCT in pediatric OCD found no difference between intensive and weekly treatment (Storch et al., 2008). Clinically, we recommend that therapists take motivational factors, developmental level of the patient, psychiatric comorbidity, need for a faster response, and cost into account when determining session frequency. Less frequent sessions may be sufficient for highly motivated patients with mild to moderate OCD symptoms who readily understand the importance of daily exposure homework exercises, whereas patients with very severe symptoms or who are experiencing difficulty completing EX/RP tasks between sessions might benefit more from a more intensive visit schedule.

5.2.10 Efficacy of EX/RP, Pharmacotherapy, and Their Combination

Although numerous RCTs have found that serotonergic antidepressants are superior to placebo in reducing OCD symptoms, few have directly compared the relative or combined efficacy of antidepressant medications and EX/RP. Unfortunately, several of those studies included complex designs that make it difficult to draw clear conclusions about relative and combined efficacy (Marks et al., 1980, 1988). Cottraux, Mollard, and Bouvard (1990) compared fluvoxamine (FLV) with anti-exposure instructions, FLV plus weekly EX/RP, and pill placebo (PBO) plus EX/RP, and found FLV plus EX/RP and FLV plus anti-exposure instructions superior to PBO plus EX/RP; there was a trend towards an advantage for combined treatment but it failed to reach significance. Hohagen et al. (1998) compared EX/RP plus FLV to EX/RP plus PBO and found that both groups improved significantly and comparably on compulsions, but that the patients who received EX/RP plus FLV were significantly better at posttreatment on obsessions than those who received EX/RP plus PBO. Subanalyses indicated that patients who suffered from secondary depression also fared better if they were receiving EX/RP plus FLV.

The relative and combined efficacy of clomipramine (CMI) and intensive EX/RP was examined in a multicenter, randomized, controlled study conducted at our center and at Columbia University. Findings with treatment-completer data as well as intent-to-treat data indicated that at posttreatment the active treatments appear superior to placebo, EX/RP appears superior to CMI, and the combination of the two treatments does not appear superior to EX/RP alone (Foa et al., 2005); relapse was more evident following treatment discontinuation in the CMI group than in either of the treatments that included intensive EX/RP (EX/RP, EX/RP plus CMI; Simpson et al., 2004). However, the Penn-Columbia study design may not have optimally promoted an additive effect for CMI because the intensive portion of the EX/RP program was largely completed before patients reached their maximum dose of CMI. In addition, combined treatment effects may be more evident when intensive EX/RP is not used (Foa, Franklin, & Moser, 2002). Of note, an additive effect for combined treatment was found in a recent study in pediatric OCD conducted at Penn, Duke, and Brown in which CBT was conducted weekly rather than intensively (Pediatric OCD Treatment Study Team, 2004), although site effects emerged in that trial indicating that the CBT monotherapy effect at Penn was very large and thus no additive effect for combined treatment was found at this site.

In summary, methodological issues in the studies that have been conducted and a general lack of large head-to-head trials precludes confident conclusions about the relative and combined efficacy of serotonergic medications and EX/RP. The absence of conclusive findings notwithstanding, many experts continue to advocate combined procedures as the treatment of choice for OCD (Greist, 1992). In clinical practice, it is common to see patients for EX/RP treatment who are taking Serotonin Reuptake Inhibitors (SRIs) concurrently. In uncontrolled examinations of EX/RP treatment outcome for adults (Franklin et al., 2002) and youth (Franklin et al., 1998; Piacentini, Bergmann, Jacobs, McCracken, & Kretchman, 2002) treated in OCD outpatient clinics, no posttreatment differences in OCD symptom severity were detected between patients who received EX/RP alone versus those who were on SRI medication when receiving EX/RP. Thus, therapists can feel some confidence that the extant literature support two key conclusions: (1) concomitant pharmacotherapy is not required for every patient to benefit substantially from EX/RP and (2) concomitant pharmacotherapy does not appear to inhibit EX/RP treatment response.

5.2.11 Cognitive Therapy (Treatments Targeting Antecedents Cognitions)

Early studies of cognitive therapies for OCD found few differences between standard behavioral treatments and behavioral treatments augmented with cognitive techniques (e.g., Emmelkamp & Beens, 1991; Emmelkamp, Visser, & Hoekstra, 1988). However, advances in cognitive conceptualizations of OCD were followed by the development of more efficacious and durable cognitive treatments. Freeston et al. (1997) found a cognitive-behavioral intervention efficacious compared to a wait-list control group for patients with "pure" obsessions. Several other studies (Cottraux et al., 2001; McLean et al., 2001; Vogel, Stiles, & Götestam, 2004; Whittal, Throdarson, & McLean, 2005) have suggested equivalent results for cognitive therapy and EX/RP, respectively, although procedural overlap between the two conditions in these studies precludes confident conclusions. Together with data from studies attesting to the utility of cognitively oriented approaches for OCD-related conditions such as hypochondriasis (Barsky & Ahern, 2004; Warwick, Clark, Cobb, & Salkovskis, 1996), cognitive therapies hold promise for the treatment of OCD, and might be an efficacious potential alternative to EX/RP.

5.2.12 Mechanisms of Change Underlying the Intervention

The etiology of OCD remains a source of wide speculation and a host of neuroanotomical, neurochemical, and psychological theories, and the neurobiology of the obsessional process and changes in glucose metabolism in implicated brain regions following EX/RP has already been established (Baxter et al., 1992). That said, the factors associated with etiology may or may not be the factors associated with maintenance, and it is highly unlikely that a single cause, genetic or otherwise, will ever be found for a disorder so complex and heterogeneous. Nevertheless, Mowrer's two-factor theory (1960) explains maintenance of pathology in OCD by suggesting that intrusive, spontaneous, and involuntary obsessions give rise to anxiety, and that compulsions are executed responses designed specifically to reduce it. An analogous application in chronic tic disorders (CTDs) has also been posited: in the case of CTDs, the

unpleasant premonitory urges are also intrusive, unwanted, and involuntary, and clearly have their origins in neurobiological dysfunction (Mink, 2001). Thus, the obsessions in OCD and the premonitory urges in CTDs are both unwanted, neurobiologically mediated events associated with negative affect or discomfort. That said, completion of the compulsions or tics themselves can be considered according to two-factor theory to be semi-volitional, in that they are both executed responses designed to reduce obsessional distress or unpleasant premonitory sensations (Bliss, 1980; Leckman, Walker, & Cohen, 1993). Accordingly, exposure to the situations that provoke obsessions or premonitory urges without engaging in the compulsion or tic to negatively reinforce (reduce) that urge will eliminate the negative reinforcing effects of the intentional behavior, and thus eventually reduce the frequency and intensity of these thoughts or sensations. Notably, the efficacy of EX/RP for OCD is well established (Abramowitz, Whiteside, & Deacon, 2005; Barrett et al., 2008); moreover, habituation to urges to engage in compulsions occurs over time, and subsequent reductions in the frequency and intensity of obsessions and urges to ritualize are consistently observed (Himle & Franklin, in press). Empirical study of this theoretical approach and the behavioral procedures emanating from this theory is relatively new in CTDs, but there is now empirical evidence for EX/RP's efficacy for CTDs (Hoogduin, Verdellen, & Cath, 1997; Verdellen et al., 2004). Perhaps more importantly on theoretical grounds, several studies now also indicate that premonitory urges habituate over time when patients refrain from engaging in tics despite having intentionally promoted tic urges (Hoogduin et al., 1997; Verdellen et al., 2008). As mentioned above, our clinical presentation and practice includes attention to OCD-relevant dysfunctional beliefs, but fundamentally it is our view that exposure provides the optimal context to change these mistaken beliefs, and thus we emphasize it throughout our work with OCD patients.

5.3 Basic Competencies of the Clinician

In our view, basic competencies for a clinician treating OCD include: (1) providing a proper diagnosis; (2) conducting a comprehensive assessment blended with accurate and psychoeducation; (3) leading an empirically grounded discussion of treatment alternatives; and if treatment with EX/RP is ultimately selected, (4) delivering hierarchy-driven exposure plus ritual prevention in a manner that reflects knowledge of the complexities of this treatment and this disorder, with consistent reliance upon the core theoretical model that underlies treatment when treatment does not proceed smoothly. Development of these basic competencies will likely be hastened via regular access to expertise in the disorder; organizations such as the Obsessive Compulsive Foundation, the Association for Behavioral and Cognitive Therapies, and the Anxiety Disorders Association of America facilitate such access through their regular training institutes and workshops. The lead author's development of these basic competencies was jump started by ready access to one of the world's foremost authorities on CBT for OCD, Dr. Michael Kozak, as his first clinical supervisor during internship. The best substitute for experience is the experience of others, after all, and all better when the other whose experiences are being accessed has a wealth of information to share and the wisdom to know how to share it without demoralizing or humiliating the therapist in training.

Diagnosis. As reviewed above, DSM-IV TR defines OCD by the presence of recurrent obsessions and/or compulsions that interfere substantially with daily functioning; there is a

time criterion for OCD (>1 h of obsessions and compulsions per day) that is designed to assist the clinician in not diagnosing subclinical cases. However, this time criterion was not generated empirically and should not be adhered to rigidly (e.g., if the patient has 30 min total per day of obsessions and/or compulsions yet is highly avoidant of situations likely to trigger obsessional distress or urges to ritualize). Obsessions are "persistent ideas, thoughts, impulses, or images that are experienced as intrusive and inappropriate and cause marked anxiety or distress" (p. 457). What they are not, however, is positively valenced. For example, the first author once conducted a consultation on a case of a teenage boy whose symptoms were being conceptualized as OCD, yet seemed to focus primarily on his great enthusiasm for the local hockey team, which his parents and the referring clinician described as "obsessional." A comprehensive discussion revealed that the boy's focus on the sport that he loved was motivated in part by his feelings of general incompetence at an academically challenging high school; importantly, his thoughts about his hockey team were not experienced as intrusive and did not cause anxiety or distress, except when he was being criticized by his parents for caring more about hockey than about his studies. There are no positive obsessions, and when the description of "obsessional" content has a clear positive valence to it (e.g., fantasizing intentionally about murder rather than experiencing intrusive, unwanted thoughts of harming another person intentionally) then the interviewer should clarify this important distinction and concentrate on procuring an accurate diagnosis of some other condition if appropriate.

It is important for the clinician to keep in mind that obsessions give rise to anxiety, and are unintentional, whereas compulsions are "repetitive behaviors or mental acts, the goal of which is to prevent or reduce anxiety or distress" (p. 457). Again, the competent clinician needs to discern that repetitive behaviors are indeed serving this neutralizing function, are taking up more than a trivial amount of time, and are being conducted in a rigid manner or according to some set rules. Passive avoidance behavior, though often prominent in OCD, does not in and of itself constitute compulsion; so, becoming anxious in a social situation or in the presence of unpleasant physical sensations and responding to these distressing thoughts or feelings by leaving the situation does not meet this criterion, and thus other diagnoses might be more appropriate. The competent clinician should ask the patient to review the most recent experiences of obsessional distress and then ask, "So when that thought entered your mind, did you do anything to get rid of it or to try to make it less distressing for you?" This allows the clinician to define compulsions by their function, and evaluate whether mental rituals are present that the patient would not necessarily view as compulsive in the classic sense of the term. Many of our patients will quickly tell us that they do not have washing rituals, as if to say that they do not have compulsions since these are perceived to be the most common if not the quintessential compulsive behaviors. The competent clinician is searching for evidence of the "OCD tennis match" that so often characterizes the subjective experience of these patients: OCD serves (e.g., unwanted obsessional thought about harm befalling a loved one), the patient returns serve (e.g., replacing this intrusive thought with an image of the loved one safe at home), OCD returns the return of serve (e.g., "How can you be SURE that she's safe?"), which is then returned again by the patient (e.g., repeating the safe image again while calling the loved one's cellphone to check with them directly), and so on. Once this pattern is identified, the clinician can then determine whether there are other content areas that conform to this same pattern, cause distress, and interfere with functioning. With this search completed and the differential and comorbid diagnoses surveyed, the clinician would be well on his or her way to providing a proper diagnosis of OCD.

Assessment and Psychoeducation. The competent clinician conducts the assessment using the various interviews and questionnaires described above, but with an overarching goal of establishing for the patient both the "tree level" (e.g., specific obsessions and functionally associated compulsions) and "forest level" (e.g., overarching principles that define the disorder and help patients develop the ability to predict what OCD will do) patterns of OCD. The demonstration of basic competence must include both of these elements, since the heterogeneity of OCD requires that the patient quickly develops a working knowledge of what constitutes an obsession, what constitutes a compulsion, how obsessions are negatively reinforced by compulsions, which provide relief in the short-run but perpetuates the frequency and intensity of obsessions in the long-run. This information can be provided directly (e.g., "First I'm going to ask you about the obsessions, the thoughts that give rise to anxiety, and then about compulsions, which are the behaviors or mental acts you engage in intentionally to reduce the obsessional distress or to decrease the likelihood that something bad really happens") but should also be asked about via example (e.g., "And if you were to suddenly develop a fear of blue carpets and have to neutralize that fear by touching a metal object, which of those would be defined as an obsession and which as a compulsion?") so as to quickly teach the basic elements of OCD psychopathology before having to consider the treatment implications of this functional relationship, which will come later on in the discussion of treatment alternatives.

Another important task that arises in assessing OCD patients and providing basic information for them in preparation for the discussion of treatment alternatives is the chronicling of current functional impairment. OCD patients are often highly fearful and they exhibit a range of insight into the senselessness of their obsessions and compulsions; insight is compromised when confronted with fear-evoking stimuli, too, which means it is very important to have at the ready a clear list of functional difficulties that the patient is experiencing as a result of OCD. In pediatric OCD, there is a formal measure designed specifically for this purpose (Piacentini, Peris, Bergman, & Chang, 2007); with adults, the clinician should be sure to survey interpersonal difficulties arising due to OCD, the effects of avoidance on attainment of personal and professional goals, quality of life assessment, and so on. This information is vital when the patient has to make a decision about whether to enter into a treatment that is designed intentionally to be distressing (EX/RP) or, if already participating in that treatment, having to decide about whether to proceed with particularly anxiety-evoking exercises. The competent clinician needs to frame those discussions with the implications of not moving forward for the patient's benefit (e.g., "Remember how you said you thought your marriage would be much stronger if you were able to refrain from asking your wife for reassurance?") rather than simply reiterating the theoretical framework of EX/RP (e.g.,"Treatment outcome will be compromised if you don't proceed in refraining from your reassurance seeking"). Optimally both tacks will be taken by the clinician in an artful manner – in fact there is now quite a bit of interest in OCD research about the inclusion of Motivational Interviewing techniques in the context of delivering this treatment (Simpson, Zuckoff, Page, Franklin, & Foa, 2008).

Discussing Treatment Alternatives. Basic competence in leading a discussion of treatment alternatives starts with a working knowledge of the extant pharmacotherapy and psychotherapy outcome literatures. This is important since OCD patients are known for their own working knowledge of this literature, and a clinician who wishes to establish his or her expertise and competence in this area must have a good working understanding of what this literature tells us about what to expect from the various therapies. Overstatement of the likelihood of success in EX/RP without an explicit acknowledgment of the difficulties inherent in doing this

form of therapy is a place where inexperienced clinicians can sometimes run aground. It is reasonable to say from the literature reviewed above that we should expect that approximately 75–85% of patients who complete EX/RP will respond to treatment, response is likely to be substantial but not complete, most who make gains will likely maintain them, and the better patients do in the short-run (acute treatment) the better they will do in the long-run (long-term outcomes). It also appears that combining EX/RP with pharmacotherapies of established efficacy (e.g., serotonin reuptake inhibitors) will at the very least not compromise outcome and, especially perhaps if the EX/RP is conducted weekly, could enhance outcome. Factors associated with attenuated outcome such as concomitant depression, poor insight, etc., should also be discussed up front by the clinician, especially with those patients who exhibit these risk factors.

Discussion of treatment alternatives should not end with only the treatment that the clinician is offering, either. Patients should be provided with the pros and cons of each of the empirically supported regimens, as well as with a clear statement that the absence of evidence for a particular regimen is not the same thing as evidence that it does not work. Evidence from randomized controlled trials provides a more educated guess about any given patient's outcomes, but does not guarantee them one way or the other. Some treatments require less effort, time, up front costs, and intentional confrontation with anxiety-evoking situations, and thus the clinician should be sensitive to the patient's state of mind and should not oversell any particular treatment, since ultimately it is the patient who will make this choice in the end.

Conducting Treatment. Although a detailed description of basic competence in delivering EX/RP from beginning to end is precluded by space considerations, there are some key elements that must be done correctly if treatment has any chance of working. First, the treatment should be collaborative in nature, but guided by the clinician's understanding of the theoretical model, the manual's guidance, and his or her working knowledge of the patient as well. Treatment must begin with a clear plan, and in our view a sufficiently detailed hierarchy of situations likely to evoke a little, some, a lot, and a great deal of distress across the key obsessional themes is needed. We have a motto in our work that "OCD is like Hawaii" in that there is typically a big island of greatest concern but often several smaller ones, each of which can be subdivided into low, medium, and high anxiety at least. Teasing out obsessional themes, associated rituals, and the areas of greatest anxiety and functional impairment will dictate where treatment should begin. We preach "taking one island at a time" and "doing the best you can in the meantime" with obsessional themes that have yet to be targeted: for example, if a patient has obsessional fears of contamination as well as fears of losing important items and of harm befalling loved ones, we would encourage the development of three separate hierarchies, each broken down in this manner. The competent clinician will ask the patient to participate in exposures in session and to complete assignments related to the themes addressed in session, with clear instructions in the theoretical rationale for ritual prevention as well as practical advice as to how best to refrain from ritualizing when anxiety is high. The beginning clinician needs to walk the fine line between acknowledging the difficulty of completing exposure tasks with enthusiastic support for efforts, even when those efforts are only partially successful, along with emphasis on moving towards "behaving as if you don't have OCD." We expect partial success in the beginning of treatment, yet if we settle for partial improvements without complete response prevention we run the risk of compromising treatment outcome since OCD is still being "fed" via negative reinforcement. Along this road lies the task, among the most difficult

lessons for the beginning clinician, to make patients aware of the psychological consequences of their choices rather than to make the choices for them. Adopting this stance will assist the clinician in not taking too much responsibility for the patient's choices, which will prevent subsequent desperate efforts for the clinician to "make them do it"; such efforts are often counterproductive, and can compromise alliance with little tangible payoff in terms of symptom reduction. A very long time ago, the lead author was particularly frustrated with a patient's partial compliance with ritual prevention and was expressing this in a supervision meeting. Dr. Kozak, the clinical supervisor, responded to the diatribe by suggesting that "You appear to be confused about something here – do you think this treatment is about you, or about the patient's own choices?" What followed were constructive suggestions as to how best to help the patients marshal their own emotional resources and social support to help the patient do what needed to be done, rather than to increase the pressure, sharpen the rational arguments, and fine tune the level of vitriol the novice therapist thought would be needed to accomplish this important task. With clarity improved, the therapy proceeded much more smoothly from that point on.

5.4   Expert Competencies of the Clinician

The old adage of "watch one, do one, teach one" in our view simply does not do justice to the treatment of OCD, in part because with wide symptom heterogeneity under the broad diagnostic umbrella there is no true quintessential case of OCD from which to generalize. Most studies of OCD psychopathology suggest at least 5–6 clusters of distinct OCD patient profiles, with additional variability along the continuum of obsessional theme, associated rituals, degree of passive avoidance, level of insight, comorbid symptoms, and the developmental continuum, which makes it extremely difficult to transfer knowledge from one subcluster to the next without a wealth of clinical exposure. One way to get the kind of exposure necessary is to have the novice therapist who wishes to move beyond that point in his or her own professional development conduct initial intakes for new patients; in the case of the first author, approximately 1–2 new patient intakes for the first 3 years of practice in the clinic allowed for development of a broader perspective of how OCD manifests. Treating a subset of these patients then provided further opportunity to hone the craft of delivering treatment, developing a flexible clinical style that is nevertheless deeply rooted in empirical and theoretical soil.

Making Reliable Predictions. In our view, the expert clinician must have such a thorough understanding of the theoretical model and its specific application in individual patients – both forest and trees, as it were – that he or she can assist patients in anticipating what OCD symptoms are likely to arise next. Making reliable predictions about what OCD will do next is a surefire way to garner the patient's faith in the therapist and in his or her understanding of the disorder, and that faith can then be translated into confidence that the chosen exercises are being devised in collaboration with someone who knows the disorder extremely well. It was well into the first author's career focusing on OCD and its treatment when a young patient delivered a compliment that underscores what we view here as the goal for developing expert competency: after the author had asked a question in an intake about what the patient's OCD would require of her next after she had washed her hands and yet had to turn off the contaminated bathroom faucet with a now decontaminated hand, the patient whispered to the therapist so her parents could not hear, "Are you one of us?" Perception that the clinician

has truly mastered OCD and can anticipate its next several moves will go a long way toward developing the trust necessary for him or her to move forward with an inherently difficult regimen.

Keeping the Complex Simple. "Let it go, don't make it go," is what the first author has used as a seven-word summary of the many volumes written to describe EX/RP. Establishing the core concepts in OCD first is crucial to be able to then boil it all down to its most basic elements. Obsessions give rise to anxiety, compulsions reduce it, passive avoidance is a way to prevent one's OCD from being triggered in the first place, and rituals and avoidance serve the same function, which is to placate OCD in the short-run yet strengthen it in the long-run. Treatment, then, hinges on changing the maintenance factor, i.e., removing OCD's main source of fuel, which is rituals and avoidance. Patients need to understand each and every one of their own symptoms using this conceptual model, and often the expert clinician will encourage patients to stretch even beyond their own current symptoms to be able to classify obsessions, compulsions, passive avoidance behaviors, and their likely functions for symptoms that they had once and have now faded, even for symptoms that they have never had. Knowledge is power, and the patients must be sufficiently knowledgeable so that they can quickly recognize OCD whenever it rears its ugly head, and take the appropriate action to counteract it. The appropriate action is often no action at all, and this needs to be conveyed clearly to patients: anything that is done in the service of reducing obsessional distress in the moment will perpetuate OCD, so the focus goes instead towards going about one's business, directly confronting the anxiety rather than running away from it. When a therapist develops confidence in this conceptual model he or she is empowered to convey this clearly to patients, which improves patient confidence in the efficacy of the treatment procedures, even when anxiety persists or gets worse immediately because of the steadfast refusal to fix it. Every possible scenario of OCD can be put through this basic conceptualization, which robs OCD of the power to overwhelm patients with "new" symptoms. "There are no new symptoms – only new disguises" is one way of making this point clearly, and getting patients to understand this can encourage them to use the treatment procedures that flow from the conceptual model more confidently and more quickly, which in turn will reduce the amount of compulsions that get "missed" and thus contribute to obsessional frequency and intensity down the line.

"I once knew a kid who …." Decades worth of experience treating OCD provides a bank full of clinical vignettes that can be drawn upon to help underscore key points during the treatment. Provided of course that these vignettes are delivered in a HIPAA-compliant fashion, patients are often better able to relate to, and benefit from, the stories of those who have been through what they are currently going through, and so the clinician should make ample use of these opportunities in treatment. These clinical tales are often at their most useful at "stuck points" in treatment, such as when patients are declining to move forward with difficult exposures, unwilling to confront the most threatening items on the hierarchy. Those of us who have treated thousands of OCD patients over the years can readily recall those who were unable to clear this important hurdle, as well as many if not most of our patients who were successful in reclaiming their lives from OCD despite very high levels of anxiety. An expert therapist will be able to weave in the clinical vignettes seamlessly in an effort to move the treatment forward, and will be able to judge whether the story should have a happy or unhappy ending depending on where the patient is at present with respect to motivation, readiness to change, and confidence in the conceptual model and in the treatment procedures that flow directly from it.

"The best way out is through." Expert therapists are likely to be more comfortable in delivering the bad news of OCD treatment, that it will require a great deal of effort, that there are times when that effort will not seem to be worthwhile, and that OCD is a formidable foe indeed that will not relent easily. Those with a great deal of clinical experience are perhaps more willing to embrace the possibility of failure, which allows them to be more direct with patients in providing expectations about treatment course and progress, regardless of its valence. The experts we have encountered seem less comfortable with overselling the treatment, since having set up unrealistic expectations up front to encourage a patient to try EX/RP may well backfire when the patient is progressing to the most difficult exposures on his or her hierarchy. Embracing such difficulty with metaphors tailored to the patient's interests and learning history is also a behavior that an expert therapist is more likely to be able to engage in than a novice, and in fact seemingly off-task conversations at the beginning of the treatment (e.g., "So tell me about something you're really good at") can then be used to underscore key teaching points in treatment. For example, a young man who had played basketball extensively during his childhood and adolescence was confronting his most anxiety-provoking rung on his contamination hierarchy, which was proving to be extremely difficult during the first exposure session devoted to that item (public toilets). The therapist, sensing the patient's loss of resolve in the presence of intense, panic-like symptoms, asked the patient about his experiences of learning how to shoot a jump shot from 18 ft away from the basket. The therapist then asked the patient (who by this time was hyperventilating) to recall whether his grade school basketball coaches initiated practice with 18-ft jump shots or whether they started in closer to teach good form. "Good form first," the patient replied. The therapist then asked about whether the first opportunities in practice to shoot 18-ft jump shots were as easy as shooting from 5 ft away. "Of course not, especially when you're not being guarded!," the patient replied. The therapist then asked the patient to recall whether shooting of 18-ft jump shots, unguarded, ever got any easier, knowing full well that the patient was an accomplished point guard who had most certainly mastered this skill. "Sure it did, and then we worked up to taking them in practice with the big guys running at us full speed." Grasping the metaphor at this point, the patient said: "And I suppose that right now the anxiety is the big guy running at me full speed as I line up the shot." "Something like that," the therapist smiled and replied. The patient's next move, which he was capable of making now that the treatment procedures had been clarified in a language he readily understood and now his anxiety had been modulated at least somewhat (he was still of course sitting on a public bathroom floor), was to proclaim: "Well, we can always make a ball fake and take it straight to the rim!" which he proclaimed with enthusiasm as he touched the toilet seat directly. A less-experienced therapist might not have thought to glean this information up front nor been able to employ it at a pivotal stuck point, but rest assured that experience and good supervision will hasten such developments.

Managing Case Complexity. Some years back, our research group conducted a naturalistic study of the effects of therapist experience on EX/RP outcomes in adult outpatients with OCD, and found that the patients of clinical psychology interns and other inexperienced therapists achieved posttreatment outcomes that were comparable to those achieved by the patients of our most experienced therapists (Franklin et al., 2003). Of note, however, was the fact that cases were not assigned to therapist at random but rather by the senior-level supervisors, who made case assignments based on a host of factors including case complexity. Case complexity in OCD refers both to the complexity of the OCD symptoms themselves, but also to the comorbid

symptoms and diagnoses, treatment histories, interpersonal strengths and challenges, and family factors. In general the more complex cases were assigned to the more experienced therapists, since there are a number of key issues to be addressed in treatment that may not be attended to sufficiently when the therapist does not have a wealth of experience upon which to draw.

Data from clinical samples of OCD patients suggest that comorbidity is likely to be the rule rather than the exception, so the expert clinician must certainly assess and manage comorbidity in the context of conducting EX/RP. As we have outlined in the context of our work with trichotillomania (Franklin & Tolin, 2007), there are several potentially reasonable options to consider clinically in the presence of comorbidity: (1) continue to focus on OCD symptoms regardless; (2) attempt to incorporate some clinical procedures and devote some session time to management of comorbid symptoms but continue to focus largely on OCD; (3) shift the focus of treatment to the management of comorbidity, with an eye on returning to OCD relatively quickly; or (4) suspend OCD treatment to focus exclusively on the comorbidity, and refrain from reinitiating OCD treatment until the comorbid symptoms are under control. Successful navigation of this rather complex decision tree relies on the judgment of the clinician as well as knowledge of the extant literature: for example, a recent paper indicated that EX/RP outcomes for pediatric OCD were less robust if the patients had been diagnosed with a comorbid externalizing disorder (Storch et al., 2008), so the experienced and empirically grounded clinician would already be considering a different course of action if this were the clinical presentation up front. Considering the mechanism by which these effects could have occurred also should be expected of an expert clinician, and thus the decision in such cases to defer OCD treatment in this case would have to be delivered in a savvy manner to help families understand how these symptoms affected EX/RP outcomes and why the best course of action may be to target the externalizing disorder first. An expert clinician should have a working knowledge from the literature of which comorbid conditions are likely to attenuate with treatment of the OCD ("two birds with one stone"), which are likely to persist, and how to manage both disorders in sequence. We are also careful when assigning cases to take the patient's interpersonal style into account, since some of our more persistent patients might respond more to the firm limits that a senior expert can often provide.

5.5   Transition from Basic Competence to Expert

There may well be multiple paths that can be traversed in order to accomplish transition from basic to expert competence, but most assuredly every one of them is paved with gaining more and more clinical experience conducing EX/RP with clinically ill OCD patients. This is not to say that clinical experience alone will necessarily yield the desired outcome – indeed there are many examples in sports and music where practicing incorrectly can result in the development of bad habits that are difficult to break. However, in our view, it is essential that the clinician who wishes to achieve expert status continues to practice actively with OCD patients rather than simply relying on the cases brought into clinical supervision by trainees. Some of the key clinical decisions to be made in conducting EX/RP with OCD patients have been highlighted here, and there are many excellent and more detailed references in the form of state-of-the-art treatment manuals that can be employed in the service of helping OCD patients confront the situations and thoughts that evoke obsessional distress while simultaneously refraining from

rituals and other forms of avoidance. The clinician interested in transitioning from basic to expert competence is vigorously encouraged to find these resources, compare them, and develop a consistent approach to diagnosis, assessment, discussion of treatment alternatives, and treatment. It is also helpful to access when possible the consultation of experts, since some of the more obvious mistakes in dealing with OCD patients (e.g., arguing with them about possibilities of feared outcomes) are virtually ubiquitous and can probably be avoided without having to be experienced directly.

It is imperative to keep up on the latest developments in clinical research in order to achieve and then maintain expert status: perhaps unlike most patients, individuals with OCD and their families are notable for the degree to which they have developed at least a working knowledge of the literature, and gaps in your own knowledge will serve to reduce trust and perhaps to increase patient resistance. For example, one mother of an OCD patient at intake unfurled a very detailed notebook complete with RCT study design slides and, when the therapist completed his discussion of the outcome literature, she reviewed her copious notes and then asked, "Doctor, I noticed that you did not allude to the findings of the De Haan study – was there some reason you omitted that?" Had the therapist's answer been, "What De Haan study?," the interaction would have gone quite differently than it did, which was a perhaps somewhat overly detailed discussion of the methodological necessity of a control group to establish relative efficacy, especially early on in the development of a treatment literature. Assured by the response, the mother signed up her child for treatment with this experienced therapist.

Workshop attendance can also facilitate the transition from basic to expert competence, although it is important that the burgeoning expert signs up for trainings that are at least at the same level of current competence or, better yet, above that level. Moreover, it is important to be willing to flaunt one's ignorance at such workshops, since unwillingness to ask questions out of concern that "I should already know that," is the surest way to remain in a fledgling state. Ongoing consultation is often part of these trainings and, as highlighted by the Valderhauget al. (2007) study, even indirect access to an expert supervisor was associated with excellent and durable outcomes in a rural outpatient setting that was not an OCD clinic per se.

5.6   Summary

Assessment and treatment of OCD is both challenging and rewarding, and although the transition from basic to expert competence is an arduous journey that requires years of direct clinical work, access to knowledgeable supervisors and consultants, continued, rigorous training, and the willingness to keep up with a literature that seems to be growing exponentially, it is nevertheless a sojourn well worth undertaking for a host of reasons. First, amount of suffering evident in patients with OCD is immeasurable, and quality of life in these patients is often severely compromised. Second, the empirical evidence clearly indicates that we have treatments that are effective in reducing symptoms and alleviating OCD-related dysfunction; these treatments are neither universally nor completely effective, but it is clear that completing EX/RP either alone or in combination with pharmacotherapy is associated with substantive and lasting benefits for most patients. Third, OCD is more common than previously believed, and there is a great need for practitioners who know the disorder well who can implement EX/RP in accordance with the theoretical model upon which it is founded. Fourth, OCD patients and

families who believe they were understood and treated well are often excellent sources of subsequent referral. In concert with grateful referral sources who are pleased to see their most challenging OCD cases get and stay better, it is realistic to build an OCD subspecialty practice expeditiously.

The work in developing expertise in OCD and its treatment over the past 2 decades has been extremely satisfying, and will continue to be so. In many ways, the subjective experience has been best captured in a quotation attributed to the late and legendary Philadelphia Phillies' broadcaster Harry Kalas, who was asked why after over 40 years of broadcasting baseball games he still loved his work so much: "Because every single day you come to the ballpark you can expect to see something that you have never seen before." OCD's heterogeneity and the many clinical nuances that have to be navigated to deliver effective EX/RP provide that very same sense of wonder even after doing so for a very long time. That said, returning again and again to the theoretical model upon which treatment rests allows the clinician a way to understand all of these new observations and to put them in a context for patients that will help them to understand them well too. It is this knowledge, as well as the support of a therapist who knows the disorder as well as one can without actually suffering from it, that assists even the most severe patients in doing what needs to be done to reduce the deleterious effects of OCD and thereby reclaim their lives.

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6 Post-Traumatic Stress Disorder

Daniel F. Gros · Peter W. Tuerk · Matthew Yoder · Ron Acierno

Abstract: From its initial definition and frequent revisions in the Diagnostic and Statistical Manual of Mental Disorders, assessing and treating posttraumatic stress disorder (PTSD) has presented many challenges to clinicians and researchers alike. However, through advances in cognitive and behavioral theory and practice, a number of evidence-based assessments (EBAs) and evidence-supported treatments (ESTs) have been developed to address this complex disorder. In this chapter, we briefly review the diagnostic features and EBA practices for PTSD. We also detail the mechanisms involved in the maintenance and treatment of PTSD and the EST approaches for the disorder. Finally, we outline the basic and expert clinician competencies involved in the treatment of PTSD from an evidence-based, cognitive-behavioral perspective.

6.1 Overview

In this chapter, we briefly review the diagnostic features and assessment practices for posttraumatic stress disorder (PTSD). We also detail the mechanisms involved in the maintenance and treatment of PTSD and the evidence-supported treatment (EST) approaches for the disorder. Finally, we outline the basic and expert clinician competencies involved in the treatment of PTSD from an evidence-based, cognitive-behavioral perspective.

6.1.1 Diagnostic Features

As defined by the *Diagnostic and Statistical Manual of Mental Disorders* (DSM; American Psychiatric Association, 2000), PTSD is characterized by (A) exposure to a traumatic event in which the individual experienced, witnessed, or was confronted with an event that involved the actual or threatened death or serious injury to one's self or others and the individual's response to said event which involves intense fear and helplessness. Traumatic events that commonly result in PTSD include, but are not limited to, military combat, being a victim of a violent assault or other crimes, natural or man-made disasters, motor vehicle accidents, or being diagnosed with a life-threatening illness. In addition, three symptom clusters are associated with the event, involving: (B) persistent reexperiencing of the traumatic event, including distressing recollections or dreams, acting or feelings as if the event were recurring, and intense psychological distress or physiological reactivity on exposure to cues that symbolize the event; (C) persistent avoidance of stimuli associated with the traumatic event, including avoidance of thoughts, feelings, memories, activities, places, or people that serve as reminders of the trauma, and general emotional numbing, including diminished interested in activities, feelings of detachment, restricted affect, and sense of a foreshortened future; and (D) persistent symptoms of increased arousal, including sleeping disturbance, increased irritability and anger, difficulty

concentrating, hypervigilance, and an exaggerated startle response. The symptoms must (E) present for at least 1 month and (F) result in significant impairment in social and/or occupational functioning.

6.1.2 Prevalence, Course, and Risk Factors

Although more than half of all US adults are exposed to at least one traumatic event (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995), lifetime prevalence for PTSD is estimated around 8% of the adult population (American Psychiatric Association, 2000). However, research demonstrates a dose–response relation between the severity of a traumatic event and the onset of PTSD (for review, see Friedman, Resick, & Keane, 2007), whereas prevalence of PTSD is higher among victims of more severe traumatic events (e.g., survivors of rape, childhood sexual abuse, and military combat and captivity). The course of PTSD is variable as the disorder can occur at any age, the symptoms can develop at variable time intervals after the initial traumatic event, and the symptoms can resolve within the first 3 months or persistent for longer than 12 months after the traumatic event (American Psychiatric Association, 2000). Several factors increase risk of PTSD, including pretraumatic (e.g., age, sex, previous trauma history, personal and family psychiatry history, and education level), peritraumatic (e.g., nature of the trauma, dissociation, and panic attacks), and posttraumatic factors (e.g., social support; Friedman et al., 2007).

6.2 Recognition of Symptoms and Their Assessment

Since the diagnosis was included in the DSM-III (American Psychiatric Association, 1980), psychological assessment and treatment practices for PTSD have received significant attention and frequent revision (Keane & Barlow, 2002). Due to a wide range of symptom presentations, inconsistent relations to trauma exposure (e.g., exposure does not always lead to the development of PTSD), and high rates of comorbidity with other anxiety and mood disorders, the assessment of PTSD can present a challenge to mental health professionals (Keane, Brief, Pratt, & Miller, 2007; Litz, Miller, Ruef, & McTeague, 2002). Nonetheless, a recognition among experts that exposure to potentially traumatic events actually is a normative experience (e.g., natural disasters, interpersonal violence, military conflicts) and a recognition of negative health and economic consequences associated with PTSD highlight the need for adequate assessment and treatment for the disorder (Keane et al., 2007). Fortunately, a number of evidence-based assessments (EBAs) exists that can aid clinicians to identify and investigate the symptoms of PTSD (Keane & Barlow, 2002). The focus of this section of the chapter is on present goals and practices for psychological assessment of PTSD.

6.2.1 Goals for the Assessment of PTSD

Litz et al. (2002) outlined several goals relevant to assessing PTSD symptoms. Although assigning a diagnosis of PTSD is often the primary goal of assessment, there are several other factors

to consider, which depend on the context of assessment, needs of the patient, and clinical resources. The primary goals of any assessment of PTSD are to (1) establish the presence and extent of a potentially traumatic event, and (2) complete a diagnostic assessment of PTSD symptoms. However, there may be several secondary goals to PTSD assessment, including: (3) placing a traumatic event or events in a life-span context in order to more fully understand factors that may have contributed to development and maintenance of the disorder, (4) evaluating compensation and litigation status for patients involved in the legal system, and (5) evaluating motivation and readiness for change for patients seeking treatment. Clinicians and researchers should select appropriate measures and tailor assessments to attain each of the desired goals. Descriptions of the various types of assessment instruments for PTSD symptomatology are given below.

6.2.2   Semi-Structured Diagnostic Interviews

Semi-structured clinical interviews utilize a combination of standard clinical interview procedures with focused prompts to assure consistent and valid coverage of relevant parameters for a given disorder. These interviews allow for thorough investigation of clinical presentation and routinely include components of formal batteries to assess specific diagnostic questions (Litz et al., 2002). Although less common in purely clinical settings due to time constraints and specialized training required to administer these interviews correctly, semi-structured clinical interviews can improve diagnostic accuracy and treatment planning and may be useful in hospital and social service settings (Keane & Barlow, 2002; Keane et al., 2007). There are two primary types of semi-structured interviews used to identify PTSD: semi-structured interviews that assess a wide range of symptoms of psychopathology and semi-structured interviews that solely focus on the symptoms of PTSD.

The *Structured Clinical Interview for DSM-IV* (SCID-IV; First, Spitzer, Gibbon, & Williams, 1996) and *Anxiety Disorder Interview Schedule* (ADIS; Di Nardo, Brown, & Barlow, 1994) are the two most common general semi-structured interviews used to assess PTSD and related disorders (Keane et al., 2007; Litz et al., 2002). In contrast to the semi-structured interviews that focus solely on PTSD, both the SCID and ADIS assess PTSD and several other anxiety, mood, and related disorders based upon the criteria listed in the DSM-IV. Both interviews have demonstrated excellent validity and reliability findings in the literature (for review, see Keane et al., 2007). One additional benefit of the ADIS is the inclusion of continuous ratings of frequency and intensity of distress for each disorder.

The *Clinician-Administered PTSD Scale* (CAPS; Blake et al., 1995) is the most commonly used PTSD-focused semi-structured interview (Keane et al., 2007); however, other interviews are available (*PTSD Symptom Scale Interview* [Foa, Riggs, Dancu, & Rothbaum, 1993]; *Structured Interview for PTSD* [Davidson, Smith, & Kudler, 1989]). In contrast to the SCID and ADIS, the CAPS provides a wider assessment of PTSD symptoms, including the 17 DSM-defined PTSD symptoms, symptoms of guilt and dissociation related to the traumatic experience, and the impact of one's symptoms on occupational and social functioning (Litz et al., 2002). In addition, the CAPS includes frequency and intensity ratings for each symptom, which provides continuous descriptors of symptomatology. Similar to the SCID and ADIS, the validity and reliability of the CAPS is well supported (Keane et al., 2007).

6.2.3   Self-Report Questionnaires

Several self-report questionnaires offer time- and cost-efficient ways to assess symptoms of PTSD (Orsillo, 2001). Self-report questionnaires have received widespread acceptance in the PTSD literature due to the ease with which they can be administered and scored (Keane & Barlow, 2002). The primary goals of these measures are to screen for PTSD symptoms, provide dimensional (e.g., intensity) data on symptom level, as well as to related impairment of PTSD, and track treatment progress (Litz et al., 2002). In order for a self-report measure to be considered an EBA, psychometric properties must be well researched, including evidence of test-retest reliability, internal consistency, and content, construct, and criterion-related validity (Antony & Rowa, 2005; Keane et al., 2007).

   Self-reported questionnaires vary in a number of important ways. One way in which measures differ is in their targeted symptoms. Some questionnaires, such as the *PTSD Checklist* (PCL; Weathers et al., 1993), the *Purdue PTSD Scale-Revised* (PPTSD-R; Lauterbach & Vrana, 1996), and the *PTSD Symptom Scale* (PSS-SR; Foa et al., 1993), map items directly onto DSM criteria to permit diagnostic classification using DSM algorithms and provide a continuous measure of severity (Litz et al., 2002). These measures tend to be brief with around 20 items each. Alternatively, several other measures, such as the *Minnesota Multiphasic Personality Inventory PTSD Scale* (MMPI-PTSD; Keane, Malloy, & Fairbanks, 1984) and *Mississippi Scale for PTSD* (MPTSD; Keane, Caddell, & Taylor, 1988), do not directly assess criterion-related symptoms of PTSD; rather, they assess overall symptom severity and associated impairment. Non-DSM-referenced scales tend to be more time-consuming and contain around 40 items each. Questionnaires also differ in time frame of assessment, whereas some measures assess symptoms over the past month (e.g., PCL and PPTSD-R) and others specify only the past week (e.g., *Impact of Event Scale-Revised* [IES]; Horowitz, Wilner, & Alvarez, 1979) or specify no time frame at all (e.g., MMPI-PTSD and MPTSD). Together, in combination with the psychometric properties (for review, see Orsillo, Batten, & Hammond, 2001), these characteristics may inform clinician's decisions regarding choosing an appropriate self-report measure of PTSD symptoms.

6.2.4   Psychophysiology

Psychophysiological methods of assessing PTSD have received significant attention in the literature (Keane & Barlow, 2002; Keane et al., 2007; Litz et al., 2002; Orsillo et al., 2001; Pole, 2007). Psychophysiological methods, including indices of autonomic reactivity (e.g., heart rate, blood pressure, electrodermal response) and emotional reactivity (e.g., facial electromyography), have been used to diagnose PTSD and assess treatment outcome (Keane et al., 2007). Psychophysiological assessment is well suited for PTSD because the DSM diagnostic criteria for the disorder include physiological reactivity to internal or external cues that resemble the traumatic event. However, this DSM criterion is not required for a diagnosis of PTSD and an estimated 40% of individuals with PTSD do not exhibit reactivity, which may reduce the ability of psychophysiological assessments to detect differences in some persons with PTSD (Prins, Kaloupek, & Keane, 1995). In fact, the largest and arguably most rigorous study of the psychophysiology of PTSD involving comparison of four psychophysiological indices and SCID-based PTSD diagnosis in a sample of over 1,300 veterans was successful in classifying only two

thirds of those with a current diagnosis of PTSD (Keane et al., 1998). Numerous factors may contribute to the disparity between psychophysiological and self-report indices, including general biological influences (e.g., age, sex, race, and fitness level), methodological factors and protocol demands, and the use of pharmacological agents (Keane et al., 2007; Litz et al., 2002). There also has been some research to suggest that psychophysiological methods may be useful in assessing changes during the course of treatment (Fairbank & Keane, 1982; Shalev, Orr, & Pitman, 1992). Although mostly limited to case studies, there is more optimism for these psychophysiological methods due to their ability to control for individual variability through within-subject designs (Litz et al., 2002). In summary, psychophysiological assessment of PTSD has some value as both a diagnostic tool and an assessment of treatment process, if used with support from alternative forms of assessment, such as self-report measures and structured interviews. However, due to the expense in terms of time and cost, patient burden, the expertise required to administer and interpret the findings, and the efficiency of more economical methods of assessment discussed earlier, the widespread adoption of psychophysiological indices of assessment is limited (Keane & Barlow, 2002).

6.2.5   Limitations and Future Directions

Together, these three approaches to assessment provide a comprehensive evaluation of the symptoms of PTSD; however, several issues should be taken into consideration when discussing current assessment practices. One of the primary concerns is the level of comorbidity and overlap between PTSD and other related disorders, especially depression and the other anxiety disorders (Antony & Rowa, 2005; Brown & Barlow, 2002). Although several of the semi-structured interviews provide information to address these concerns, a majority of self-report measures and psychophysiological indices does not assess comorbidity. A second concern relates to controversies surrounding the symptom clusters of PTSD and the symptoms of anxiety and depression more generally (e.g., Simms, Watson, & Doebbeling, 2002; Watson, 2005). Clinicians and researchers are exploring alternate assessment and classification systems, including expanding the role of functional impairment in assessment (Cohen & Mannarino, 2004), as well as, exploring a broader symptom-based, rather than DSM criterion-based system (Antony & Rowa, 2005).

6.3   Maintenance Factors of the Disorder or Problem

In the immediate aftermath of a traumatic event (0–48 h), the typical response is one of cognitive, emotional, and behavioral disruption. The event is fresh in memory and a majority of survivors evinces some degree of distress and impairment (Litz & Maugen, 2007). However, the posttraumatic stress literature of the past 20 years demonstrates that most people exposed to traumatic events, approximately two thirds, recover effective functioning within 3 months (Blanchard, Hickling, & Forneris, 1997; Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992). Nonetheless, this leaves a significant number of people for whom the initial trauma-induced distress and impairment does not subside and PTSD develops (Kessler et al., 1995).

Most traumatic events are sudden, unpredictable, outside of the range of normal human experience, and emotionally painful. Enduring symptomatology in the individuals who develop

PTSD has been parsimoniously explained by several researchers using conditioning/learning theories (Keane & Barlow, 2002; Kilpatrick, Veronen, & Best, 1985). According to learning theory, a traumatic event (e.g., combat exposure) serves as the original stimulus that leads to an unlearned response comprising PTSD symptoms (avoidance, hyper-arousal, intrusive ideation). These responses become associated with salient stimuli (i.e., "triggers") present in an individual's internal (e.g., racing heart) and external environments (e.g., loud noises) during the time of exposure, and these stimuli begin to elicit learned anxiety responses in the future. Thus, when an individual who was exposed to a traumatic event is then exposed to one of these trigger stimuli, a negative emotional PTSD response identical or very similar to the original emotional response occurs. In order to reduce or eliminate aversiveness of this learned anxiety response, individuals will escape from, and subsequently avoid, activities, places, or people that remind them of the event, thereby reducing anxiety in the short term (in response to an escape from conditioned or learned fear stimuli) but perpetuating this maladaptive learned response in the long term (by preventing extinction of the learned response).

Alternatively, several theories of PTSD focus on the thoughts, assumptions, interpretations, and beliefs that are impacted by traumatic events (for a review, see Cahill & Foa, 2007). Under these theories, traumatic events are conceptualized as providing new, often frightening information about one's self and the world, resulting in the formation of cognitive fear structures (Foa & Kozak, 1986; Foa, Steketee, & Rothbaum, 1989). Cahill and Foa (2007) note:

▶ A fear structure becomes maladaptive or pathological when (1) associations among stimulus elements do not accurately represent the world, (2) physiological and escape/avoidance responses are evoked by harmless stimuli, (3) excessive and easily triggered response elements interfere with adaptive behavior, and (4) harmless stimulus and response elements are erroneously associated with threat meaning. (p. 62)

As such, the ways in which survivors think about the self, the world in which they live, and the meaning of events/stimuli occurring in the world are often disrupted. Thus, according to this theory, posttraumatic distress results from post-event cognitions.

Current theories regarding the enduring nature of PTSD center on avoidance. Indeed, as described earlier, avoidance is one of the three characteristic symptom clusters of PTSD. The types of avoidance that contribute to the maintenance of pathological posttraumatic stress symptoms and to PTSD itself can be organized into two groups: cognitive and behavioral factors. These two categories of avoidance are not necessarily mutually exclusive, but can often be systematically related. However, for purposes of clarity, they will be discussed separately in this section.

6.3.1   Behavioral Avoidance

Given the distress and pain associated with traumatic events, it is understandable that survivors attempt to avoid stimuli which remind them of the trauma(s). However, as learning theory describes (e.g., Mowrer, 1960), after a person is exposed to a life-threatening event, a fear-response, involving aversive sympathetic nervous system arousal, may be elicited by not just stimuli present during the event but, also through processes of higher-order conditioning and stimulus generalization, so that additional stimuli and situations that are associated with either the original traumatic event, or other salient stimuli associated with the event elicit the

fear-response (Keane, Zimering, & Caddell, 1985). For example, a victim of sexual assault may associate his or her assault with darkness and the perpetrator (i.e., stimuli present during the event); however, their fear-response may be generalized to all situations involving either nighttime, men, sexual activity, and thoughts/words associated with the rape experience. To avoid distress, the victim may avoid each of these generalized persons, places, situations, including men, sexual activity, and stimuli associated with the rape itself. This avoidance behavior naturally results in diminution of negative emotions in the very short term, in effect (negatively), reinforcing more frequent use of avoidance. However, avoidance also has the negative effect of fostering withdrawal and maintaining PTSD (Mowrer, 1960). Thus, teaching individuals to confront and remain in the presence of previously avoided situations (i.e., expose themselves to these situations) that trigger anxiety will eventually reduce symptoms of PTSD. This anxiety reduction, if structured appropriately, will be complimented by increases in natural reinforcement derived by engaging in previously rewarding activities and may reduce depression.

6.3.2 Cognitive Maintenance Factors

Given that traumatic events are distressing by definition, there is a tendency to cope with the distress of reexperiencing symptoms by attempting to avoid thinking about the event itself in much the same way as behavioral avoidance is manifest in avoiding persons, places, or situations that remind one of the traumatic event. A common response to traumatic memories described by those seeking treatment for PTSD is, "I try not to think about it." However, research demonstrates that suppressing negative trauma-related thoughts leads, paradoxically, to an increase in thought frequency (Davies & Clark, 1998; Reynolds & Wells, 1999). In fact, Shipherd and Beck (1999) found that after survivors of sexual assault with PTSD were asked to deliberately suppress their negative thoughts, they reported a significant rebound effect of negative thoughts when compared to survivors without PTSD, suggesting that active thought suppression contributed to an increase in negative thoughts.

Various prominent theories of PTSD describe the mechanism by which cognitive avoidance maintains the disorder in different ways, but active behavioral avoidance of trauma-related cognitions and reminders is incorporated into nearly all these theories. For example, schema theories (e.g., Epstein, 1985; Janoff-Bulman, 1992; McCann & Pearlman, 1990) imply that avoidance maintains PTSD by preventing resolution of the discrepancy between pre-trauma internal models (e.g., the world as a safe place) and trauma-related information (e.g., the world is a dangerous place all the time) – a process that requires cognitive processing of the new information. Emotional processing theory (Foa & Kozak, 1985) and Ehlers and Clark's (2000) cognitive theory note that cognitive avoidance prevents change in the underlying memory, or fear structures, resulting in maintenance of PTSD symptoms.

Avoidance further contributes to PTSD by preventing the survivors from being exposed to information that may challenge their posttrauma beliefs. For example, soldiers returning from combat with PTSD may have learned to associate unknown people (i.e., possible enemy combatants) with danger and therefore avoid situations involving the potential of encountering crowds of people they do not know (e.g., malls, parks, restaurants, etc.). Through behavioral avoidance of social situations, they also are prevented from encountering information incongruent with their belief that strangers are dangerous, thereby maintaining PTSD symptoms.

6.3.3 Conclusion

In short, traumatic events result in behavioral avoidance, learned fear responding to stimuli that were previously neutral, cognitive confusion, and emotional pain. Associations of trauma cues with emotional pain foster avoidance of cues. Behavioral avoidance prevents cognitive and emotional processing, adjustment of erroneous beliefs, and corrective modification of conditioned associations between a fear-response and neutral or positive stimuli. Cognitive avoidance also leads to a paradoxical increase in trauma-related intrusions. Together, these behavioral and cognitive mechanisms have been shown to contribute to the development and maintenance of PTSD; accordingly, decreasing or eliminating avoidance disrupts the maintenance of PTSD symptoms.

6.4 Mechanisms of Change Underlying the Intervention

As noted above, the typical recovery pattern seen in the majority of people following traumatic events involves modifying the emotional associations and maladaptive automatic cognitions through exposure to feared stimuli. Such exposure promotes cognitive and emotional processing of events that originally may have been experienced as confusing, sudden, or nonsensical. These learning and cognitive processes happen, to a greater or lesser degree, in everyday life through conversations with others about the event and repeated contact with trauma-related cues (e.g., taking the bus to work after the original assault happened at a similar bus stop; going to crowded but safe places such as malls). Avoidant behaviors disrupt this normative process and are thought to be responsible for the maintenance of PTSD (Cahill & Foa, 2007; Kindt, Buck, Arntz, & Soeter, 2007). Given these conceptualizations of the disorder, exposure, reconditioning, and cognitive/emotional processing are all active mechanisms of therapeutic change in symptoms of PTSD. The importance of, and the emphasis given to, each of these varies by specific treatment model; however, the treatments found to be most effective include each to some degree.

   Exposure treatment or therapy refers to the process of encountering trauma-related associations, cues, thoughts, and memories. Exposure therapy describes a treatment model generally based on learning theory concepts of extinction and habituation. Exposure also can be conceptualized as the opposite of behavioral and cognitive avoidance, which are the behaviors developed by individuals with PTSD to reduce aversiveness associated with trauma cues. Notably, nonavoidance and exposure foster relearning. As described above, traumatic events may result in pathological associations between a fear-response and external and internal stimuli or cues. Survivors are negatively reinforced (aversiveness is reduced) by avoiding these previously neutral cues. Because they avoid these stimuli, no extinction (unlearning) of the conditioned fear-response is possible, and the constellation of symptoms known as PTSD endures (Rescorla, 2001). Unlearning the fear-response (i.e., unpairing the association between a previously neutral stimulus such as a bus stop and the fear-response such as heightened anxiety) is necessary and achieved through repeated exposure to trauma-related cues (decreasing behavioral avoidance). In addition to the basic conditioning principal of extinction, these experiences also provide survivors with information and evidence that may modify learned maladaptive cognitions acquired during the traumatic event. For example, a combat veteran who associates strangers or crowds with a fear-response (and therefore avoids social situations)

will learn to "uncouple" the conditioned association between crowds and the fear-response via repeated, prolonged exposure to crowds/strangers in realistically safe settings (malls, parks, restaurants, etc.). In addition, many trauma survivors with PTSD find the physiological symptoms associated with the disorder highly distressing themselves (e.g., increased heart rate, sweating, shortness of breath, etc.). Thus, these visceral stimuli also become targets for exposure therapy (e.g., interoceptive exposure to prescribed exercise). Through repeated exposure to feared stimuli, not only is the conditioned arousal response extinguished (Keane et al., 1985; Kilpatrick et al., 1985), but the survivors also learn to tolerate their symptoms and learn that they can handle their arousal responses.

In addition to the more parsimonious learning theory described above, an alternative cognitive theory that explains the efficacy of exposure is emotional processing, which involves two basic premises (Foa & Kozak, 1985, 1986). The first premise is that PTSD indicates the presence of maladaptive fear structures in the memory of a survivor (see above section for more discussion). The second premise is that successful treatment modifies the maladaptive elements of the fear structure in such a way that information which previously elicited anxiety symptoms no longer does so. According to this theory, when a survivor is intentionally exposed to safe but feared stimuli, they encounter new information that is not compatible with the fear structure. In addition to modifying pathological conditioned responses, the new information is instructive about the probability and cost of feared consequences and disconfirms erroneous beliefs associated with the fear structure (Cahill & Foa, 2007).

Thus, most cognitive-behavioral treatment models include an exposure component which is thought to promote reconditioning and process mechanisms of change. However, the amount and type of exposure that is most beneficial to patients remain controversial and therapies involving only a minimum of "reliving" the trauma have been found to be effective (Ehlers et al., 2003; Ehlers, Clark, Hackmann, McManus, & Fennell, 2005; Harvey, Bryant, & Tarrier, 2003). In addition, some research has suggested that it is not only exposure-based physiological activation and reconditioning that is responsible for fear reduction (Kamphuis & Telch, 2000; Lang & Craske, 2000), but rather, repeated nonreinforced exposure to feared stimuli results in a completely new memory being formed (Rescorla, 2001). Following this line of thinking, the formation of new memories associated with cognitive change leads to fear reduction (Kindt et al., 2007), but the likelihood of this happening independent of behavioral exposure is low.

Despite the questions remaining surrounding the optimal amounts of exposure or the underlying cognitive mechanisms of impact, the role of exposure to trauma-related cues and stimuli in PTSD symptom change and extinction is well established (Domjan, 2003; Resick, Monson, & Gutner, 2007). As such, exposure and the resulting cognitive/emotional processing and reconditioning are considered primary mechanisms of change in PTSD.

6.5   Evidence-Supported Treatment Approaches

Based upon the guidelines developed by the Division 12 Task Force on Promotion and Dissemination of Psychological Procedures (1995; Chambless et al., 1996) and the American Psychological Association Task Force on Psychological Intervention (1995), Chambless and Hollon (1998) outlined a definition for ESTs. These criteria are repeatedly discussed throughout the literature and, thus, are described in brief here. The five criteria are: (1) EST must be

compared with a control group or alternative treatment in a randomized control trial (RCT) in which the EST is statistically superior to the comparison group; (2) studies of the EST must include a treatment manual, a population with reliable and valid inclusion criteria, reliable and valid outcome assessment measures, and appropriate data analysis; (3) EST must be superior to the comparison treatment in at least two independent research settings with the majority of studies supporting its efficacy. If only one study is available, in the absence of conflicting evidence, the label of "possibly efficacious" is assigned. The label of "efficacious and specific" is used if the EST is shown to be superior to an alternative treatment, including pill or psychological placebo, in at least two independent research settings.

Similar guidelines have been adopted for PTSD treatments (Foa & Meadows, 1997; Harvey et al., 2003). The ESTs for PTSD include exposure therapy (Foa, Rothbaum, Riggs, & Murdock, 1991; Rothbaum & Foa, 1992), eye movement desensitization and reprocessing (EMDR; Shapiro, 1989, 1995), stress inoculation therapy (SIT; Kilpatrick & Amick, 1985; Kilpatrick, Veronen, & Resick, 1982), cognitive therapy or cognitive processing therapy (CPT; Resick, 1992; Resick & Schnicke, 1992, 1993), and various pharmacological agents (for review, see Friedman & Davidson, 2007). The descriptions for each of the treatments are provided below.

6.5.1 Evidence-Supported Treatments

Exposure Therapy. Exposure therapy is the most thoroughly investigated form of treatment for PTSD and is found in several different variations, including systematic desensitization, flooding, prolonged exposure, or implosive therapy (Keane & Barlow, 2002). Importantly, most of the effective types of treatment for PTSD involve an exposure therapy component, including EMDR, SIT, and CPT. Exposure therapy techniques involve confronting (in realistically safe environments) one's feared persons, places, situations, and/or memories through in vivo exposure and imaginal exposure (Keane & Barlow, 2002; Resick & Calhoun, 2001). Evidence supports the efficacy of exposure therapy alone (Foa et al., 1999; Ironson, Freund, Strauss, & Williams, 2002; Marks, Lovell, Noshirvani, Livanou, & Thrasher, 1998; Resick, Nishith, Weaver, Astin, & Feuer, 2002) and in combination with other treatments (Foa et al., 1999; Lee, Gavriel, Drummond, Richards, & Greenwald, 2002; Marks et al., 1998) in comparison to wait-list control. Comparisons studies demonstrate that exposure therapy also is more efficacious than several active treatments, including SIT (Foa et al., 1991, 1999) and relaxation therapy (Taylor et al., 2003). In fact, dismantling studies that have been conducted to determine active ingredients responsible for PTSD treatment gains demonstrate that exposure in isolation is as effective as several variations of combination treatments (Foa et al., 2005; Paunovic & Öst, 2001).

Eye Movement Desensitization and Reprocessing. Eye movement desensitization and reprocessing is a controversial, but effective, treatment developed through personal observation rather than an empirical procedure (Keane & Barlow, 2002; Resick & Calhoun, 2001). The premise of EMDR is that troubling thoughts and imagines can be resolved through lateral eye movements. Thus, the basic EMDR protocol for PTSD involves: (1) visualizing the traumatic memory (i.e., imaginal exposure); (2) rehearsing the negative cognitions (i.e., cognitive exposure); (3) focusing on the physical symptoms of the anxiety (i.e., visceral exposure); and (4) engaging in bilateral eye movements by following the clinician's finger back and forth for 24 repetitions (Resick & Calhoun, 2001). The controversy centers over whether or not the

eye-movements are actually necessary or add anything to the efficacy of the treatment. Although the majority of the early research was limited to case studies and noncontrolled studies (Resick & Calhoun, 2001), more recent investigations repeatedly have demonstrated the efficacy of the EMDR in patients with PTSD (for review, see Resick et al., 2007). In fact, several studies have found no differences on similar outcome measures between the efficacy of EMDR and exposure therapy at posttreatment and follow-up (e.g., Ironson et al., 2002; Lee et al., 2002; Power et al., 2002; Rothbaum, Astin, & Marsteller, 2005). However, studies of EMDR with and without the eye movements demonstrated equal effectiveness (Boudewyns & Hyer, 1996; Devilly, Spence, & Rapee, 1998; Pittman, Orr, Altman, & Longpre, 1996), suggesting that the active mechanism of EMDR is the exposure to, and perhaps the "processing" of, traumatic memories, rather than the bilateral eye movements (Keane & Barlow, 2002; Resick & Calhoun, 2001). As such, the treatment adds little to existing behavioral and cognitive treatments. In commenting on EMDR in light of these findings, McNally (1999) noted "what is effective in EMDR is not new, and what is new is not effective" (p. 619).

Stress Inoculation Therapy. Stress inoculation therapy (Kilpatrick & Amick, 1985; Kilpatrick et al., 1982) was one of the first comprehensive treatments for PTSD (Resick & Calhoun, 2001). SIT emphasizes an individually tailored treatment program to instruct patients in a set of coping skills which in turn facilitate mastery over their fears. SIT contains multiple treatment components, including psychoeducation, muscle relaxation, breathing control, covert modeling, role playing, thought stopping, and guided self-dialogue. Several studies have supported the efficacy of SIT when compared to a wait-list control group (Foa et al., 1991, 1999); however, as described earlier, SIT and SIT with exposure appear to perform worse than exposure-alone (Foa et al., 1999), perhaps because of the fewer overall exposure trials and less overall focus on therapeutic exposure in SIT.

Cognitive Therapy. Based upon the information-processing theory of PTSD (Foa & Kozak, 1986; Foa et al., 1989), CPT was specifically designed to combine components from exposure-based treatment of PTSD with cognitive components from standard cognitive therapy (Resick & Calhoun, 2001). The cognitive components of CPT target the conflicting beliefs and meanings attributed to the traumatic event and expectations about the future. The exposure component involves creating an exposure narrative of the sensory memories, thoughts, and feelings during the traumatic event and reading the narrative daily throughout treatment. Several studies support CPT's efficacy over wait-list control groups (Chard, 2005; Monson et al., 2006; Resick & Schnicke, 1992) and show CPT to be equally efficacious as prolonged exposure (Resick et al., 2002). It is difficult to determine, however, based on existing studies, whether CPT would remain as efficacious as prolonged exposure if its exposure components were removed.

Pharmacotherapy. Several antidepressants appear useful in treating PTSD. These agents include selective serotonin reuptake inhibitors (SSRIs; Brady et al., 2000; Davidson et al., 2001; Marshall, Beebe, Oldham, & Zaninelli, 2001; Tucker et al., 2001), tricyclic antidepressants (TCAs; Davidson et al., 1990; Kosten, Frank, Dan, McDougle, & Giller, 1991), monoamine oxidase inhibitors (Kosten et al., 1991; Neal, Shapland, & Fox, 1997), and several other antidepressant agents including nefazodone (Saygin, Sungur, Sabol, & Cetinkaya, 2002), mirtazapine (Davidson et al., 2003), and venlafaxine (Davidson et al., 2006). Several other types of medications also have shown promise in the treatment of PTSD, including antiadrenergic agents, anticonvulsant agents, partial N-methyl-D-aspartic acid (NMDA) agonists, gamma-Aminobutyric acid-ergic (GABA-ergic) agonists, and atypical antipsychotics; however, more research is needed

to determine their efficacy (Friedman & Davidson, 2007). In general, although several concerns still exist regarding the generalizability to different populations and the maintenance of treatment effects after the discontinuation of the medication (Friedman & Davidson), SSRIs are considered the pharmacological treatment of choice based upon mounting support for their efficacy in the literature and their relatively mild side effects (American Psychiatry Association, 2004; Davidson et al., 2005). Note, however, that pharmacologically based improvements in PTSD symptomatology, while statistically significant and reliability reported, rarely result in complete, or even nearly complete symptom amelioration (Albucher & Liberzon, 2002).

6.5.2   Selecting Which Treatment to Use

Based on the findings presented above, there are numerous psychosocial and pharmacological treatment options for PTSD. Although it may appear that some of the active treatments outperform others in direct comparison studies and meta-analytic investigations (e.g., Bisson et al., 2007; Foa et al., 1999; Taylor et al., 2003), the small number of comparison studies combined with variations in samples, measures, and treatment procedures between studies suggest that any conclusions may be a result of numerous confounds (Benish, Imel, & Wampold, 2008; Shadish & Sweeny, 1991). In fact, in the majority of treatment studies, the comparison therapies were not intended to be actively therapeutic (e.g., supportive therapy), which, similar to placebo-controlled studies with medications, may artificially inflate the benefits of the active treatments (Benish et al., 2008). In order to address these concerns, Benish et al. completed a meta-analysis of only bona fide psychosocial treatments and found no evidence of outcome differences in PTSD symptoms or any other outcome variable, suggesting that previously reported differences among treatments may be accounted for by methodological differences. Alternatively, the centrality of the exposure component to most existing treatments may indicate that this is the "active ingredient" in effective interventions for the disorder. Given these possibilities and their implications regarding the lack of importance of specific treatment components (i.e., other than exposure), treatment choice among the ESTs should be based upon other factors, including clinician experience and preference and, most importantly, the "fit" between a particular intervention and a particular patient. For example, a cognitively advanced patient may feel well matched to CPT; whereas, a very highly motivated patient with moderate-to low-anxiety sensitivity may prefer prolonged exposure. Such matching of patient preferences to intervention characteristics may well enhance patient satisfaction and adherence (Benish et al., 2008). However, notwithstanding these potentially useful treatment components, clinicians should not lose sight of the central importance of exposure in any intervention for PTSD.

6.5.3   Limitations and Future Directions

Although several ESTs are available, a number of questions still exist regarding how best to treat patients with PTSD. In order to address these questions, future directions for the PTSD literature include: increasing the number of methodologically sound RCTs, comparison studies of active treatments, and dismantling studies to determine which components are most important to the treatment of PTSD (Benish et al., 2008; Resick et al., 2007); examining each of the ESTs in a wide range of at-risk populations including victims of interpersonal violence,

disasters, military combat personnel, and emergency service responders (Harvey et al., 2003); increasing the amount of research on the prevention of PTSD and the treatment of acute posttraumatic reactions (Friedman & Davidson, 2007; Litz & Maguen, 2007); broadening current ESTs for PTSD to treat comorbid conditions such as substance abuse and/or depression (Resick et al., 2007); disseminating the ESTs to increase treatment access for patients with PTSD (Resick et al., 2007); and, risk, recovery, and resiliency studies, including genetic studies, to determine what types of individuals are most likely to develop PTSD, recover, or never experience symptoms in order to refine treatment strategies and to direct them to those at greatest risk. Together, these future directions may aid in improving the ESTs for PTSD and the quality of care of patients with PTSD.

6.5.3.1 Basic Competencies of the Clinician

Mastery of the clinical competencies of psychotherapy is vital to administering any and all forms of psychosocial treatments effectively (Sumerall, Lopez, & Oehlert, 2000; Zaro, Barach, Nedelman, & Dreiblatt, 1977). Thus, a number of education and training programs have developed competency-based training models, including the National Council of Schools and Programs of Professional Psychology (Peterson, Peterson, Abrams, & Stricker, 1997), scientist-practitioner clinical psychologists (Belar, 1992), counseling psychologists (Stoltenberg et al., 2000), and the Association of Directors of Psychology Training Clinics (Hatcher & Dudley Lassiter, 2006). In fact, a separate section on competence was added to the American Psychological Association's *Ethical Principles of Psychologists and Code of Conduct* (American Psychological Association, 2002). Together, these events demonstrate an escalating interest in competency-based education, training, and credentialing in psychology (Kaslow, 2004; Sumerall et al., 2000).

Competence is defined as "the habitual and judicious use of communications, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and community being served" (Epstein & Hundert, 2002, p. 227). More specific to psychotherapeutic competencies, there is a set of core (or basic) and specialty (or expert) competencies that is required to be an effective therapist (Kaslow, 2004). As outlined by Spruill et al. (2004), the basic competencies include: intervention planning (i.e., integration of theory, research and practice, assessment, case formulation, and selection of the best strategy for intervention); intervention implementation (i.e., execution of the treatment plan, management of special situations, termination skills, working with and within various care systems, general case-management abilities, and self-care); and intervention evaluation (i.e., performance appraisal/self-evaluation skills and effective use of supervision and consultation). The expert competencies go a step further by building upon the core competencies through the application of advanced practices that require specialized knowledge, skills, and attitudes (Kaslow, 2004).

In the sections that follow, we adapt these notions of basic and expert competencies to the treatment of PTSD. As described earlier, most effective behavioral interventions for PTSD involve a form of exposure therapy (Resick et al., 2007). Thus, the competencies described below pertain to the skills needed to administer efficacious exposure therapy to patients with PTSD. As treatment protocols of exposure-oriented therapies are available elsewhere (e.g., Foa, Hembree, & Rothbaum, 2007; Foa & Rothbaum, 1998), these sections will focus on the

competencies involved in successfully employing these treatments, rather than step-by-step descriptions of treatment procedures and/or scripts of sample dialogues.

Similar to the standard clinical competencies, the basic skills in employing effective exposure therapy with patients with PTSD involve both specific and nonspecific therapeutic factors. Nonspecific factors involve relationship building skills, including warmth, empathy, reflective listening, and positive regard (Lejuez & Hopko, 2006; Strupp & Hadley, 1979). Specific factors refer to the particular intervention-based techniques that target, disrupt, or otherwise change maladaptive or pathological processes. Research on these factors has demonstrated a link between the nonspecific factors (Orlinsky, Ronnestad, &Willutski, 2004) and specific factors (Bemish et al., 2008) with treatment outcome across a variety of treatment modalities. Based upon the PTSD treatment literature (Foa et al., 2007), we selected three primary competencies to discuss: building a therapeutic relationship, conveying the rationale for treatment, and encouraging treatment adherence.

Relationship Building. Similar to most forms of psychotherapy, a strong therapeutic alliance is a critical component to the efficacious treatment of PTSD (Foa et al., 2007). Thus, a number of skills are needed to promote the development of a trusting therapist–patient relationship. However, as detailed below, some of these skills must be adapted to the specific needs of patients with PTSD. These skills include acknowledging a patient's decision to enter treatment, remaining nonjudgmental, restricting one's own expressions of affect, incorporating a patient's experiences into the descriptions of treatment, and being confident and collaborative in one's approach to treatment. Together, these competencies of relationship building will promote a trusting therapeutic alliance with patients with PTSD.

When initially developing a relationship with a patient, the therapist should acknowledge and support a patient's decision for entering into the therapeutic process. This initial step toward getting help can be a major turning point in a patient's well-being and psychological health and deserves the therapist's attention and positive reinforcement in light of the fact that simply presenting for treatment initially can be highly aversive. In addition, several types of PTSD patients (e.g., victims of sexual assault and active military personnel) may have been discouraged or made to feel guilty about seeking treatment. Thus, therapists must align themselves with the patient to support his or her efforts for treatment. Checks of motivation and frequent use of positive reinforcement should be maintained throughout the treatment experience, especially during transitions in treatment procedures and periods of increased avoidance (Foa et al., 2007).

A second component of relationship building involves the ability to be nonjudgmental and comfortable with the details of a patient's traumatic experiences. In particular, a therapist must be able to communicate with a patient without expressing verbal or nonverbal affect indicative of shock, disgust, incredulousness, anger, or sadness. Although this competency may seem straightforward, a combination of basic socialized responses and clinical training to both empathize and express sympathy can present subtle, though important, obstacles to developing this competency. It is very important that therapists allow their patients the space to describe their experiences and emotions by limiting their own expressions of sympathy or empathy, at least during the initial recounting of the story. Normal and natural displays of sympathy upon hearing a traumatic story, such as empathetically wincing or offering hasty condolences are not only unhelpful, but often can also be counterproductive. Therapists should strive for a balance by not overtly expressing high levels of empathy considered normal in other forms of therapy, but also not acting cold or indifferent to the patient's emotional recount of their traumatic

event. However, once a desirable balance is found, open communication with the patient will promote a healthy therapeutic relationship.

There are several reasons for therapists to restrict their immediate expressions of affect or empathy. First, when a therapist avoids expressing overt signals of distress, they model hearing about an awful traumatic event without experiencing overt distressing emotions, challenging a patient's common intrinsic assumption that traumatic events are inexorably related to uncontrollable negative emotions. Second, as traumatic events often are reexperienced in jagged, disorganized, and tangled packets of memories and emotions (Foa & Kozak, 1991), it is often difficult to guess correctly which details of the trauma are related to which emotions. By automatically empathizing with assumed emotions, a therapist risks misunderstanding and invalidation. A third reason for limiting the reactive flow of verbal and nonverbal affect or empathy is that it may promote the projection of thoughts and feelings belonging to the therapist onto the patient. This expression of emotions by a therapist, sometimes labeled countertransference, is associated with a negative impact on behavioral treatment outcomes (Ellis, 2001).

Another component of relationship building involves the retention and use of a patient's own descriptions of their fears in the therapeutic examples of psychoeducation and treatment rationale. For example, a therapist may choose to demonstrate the connection between a patient's specific set of avoidant behaviors (e.g., avoiding crowded areas) and the negative impact on their social or occupational functioning (e.g., cannot retain a fulltime job). This skill can accomplish several goals for developing a trusting therapeutic relationship. First and foremost, the use of a patient's own example of fears and symptoms demonstrates to the patients that they are heard and understood. Second, the incorporation of their descriptions into the therapeutic examples may promote greater understanding of the rationale for treatment. Finally, this act of adaptation to the psychoeducation and treatment rationale demonstrates that the therapist is tailoring treatment to the patient's individual needs.

A fourth component of relationship building with patients with PTSD involves the ability to instill hope in patients and confidence in the treatment modality through a flexible and collaborative therapeutic process. PTSD treatment often requires a large emotional commitment due to its anxiety-provoking nature. Thus, it is possible that there may be little positive reinforcement for a patient to continue treatment prior to the recognition of symptom reductions. During this period, several extrinsic reinforcers may be motivating a patient to remain in treatment, including support from family and friends and the patient's initial relationship with the therapist; however, these factors may not be long lasting if the patient does not believe that the treatment will work. In order to instill hope and confidence in the patient, a therapist must be able to sell themselves and the therapy by demonstrating their own knowledge and expertise about PTSD and its treatment. In addition, a therapist also must be collaborative with a patient's individual goals and needs to encourage their active participation while monitoring and adapting to the patient's anxiety and urges to avoid. Accordingly, a basic competency for all forms of exposure therapy is the capacity to instill confidence in patient's ability to get better. Together, these practices may aid in the development of hope and confidence in the patient and a strong therapeutic alliance with the therapist, likely improving treatment adherence, attendance, and homework completion.

Conveying the Treatment Model. A second basic competency of employing exposure-oriented therapies is the therapist's ability to clearly, effectively, and convincingly convey the

treatment model to patients with varying levels of sophistication. Although most effective behavioral treatments for PTSD involve talking about, dealing with, or imagining the traumatic event, the vast majority of exposure exercises take place outside of the treatment center and outside the eyesight of the therapist (Foa et al., 2007). Accordingly, it is imperative to the success of treatment that a patient understands and appreciates the benefits associated with exposure and, thus, be willing to engage in these activities on their own. This may be particularly challenging in patients with PTSD due to their reliance on avoidance as a method to reduce anxiety and distress (Friedman et al., 2007). Much of the treatment rationale must be presented through early psychoeducation about the disorder and the treatment for the disorder.

Psychoeducation about the symptoms and treatments of PTSD can be challenging to deliver due to the complexity of the disorder. Some common psychoeducation topics include a basic explanation of the origins of intrusive memories and nightmares, the fight or flight response, thought suppression, and explanation of the role of negative reinforcement in escape and avoidant behaviors. Therapists should be well versed in, and comfortable with, using several explanations and metaphors to be effective in conveying the information to patients. In addition, as described earlier, it is helpful to incorporate the patient's own symptoms and experiences into the psychoeducation to improve understanding of the descriptions. The primary goals of psychoeducation are to present a convincing rationale for treatment and have the patient buy into the treatment procedures. These goals can be accomplished by remaining thoroughly grounded in the conceptual model and theory underlying exposure therapy (Foa et al., 2007). The addition of research findings and the therapist's own experiences administering exposure therapy may aid in the process. Finally, as an example of these concepts, Foa et al. recommend telling patients, "that we will push them outside of their comfort zone but not outside of their safety zone" (p. 33). Together, these practices should increase the patient's understanding of the rationale for treatment and further develop the therapeutic alliance and, likely, decrease the treatment attrition.

Encouraging Treatment Adherence. A third basic competency of employing exposure-oriented therapies is encouraging treatment adherence through the control of patient avoidance. Treating PTSD effectively is analogous to treating avoidance effectively. This sentiment cannot be overstated. Although attrition rates for exposure-based and nonexposure-based treatments are similar (Hembree et al., 2003), roughly 20–30% of all patients with PTSD end treatment prematurely. Thus, specific techniques should be used to help reduce attrition rates and avoidance and increase the likelihood of successful treatment.

One technique to improve treatment adherence is to help patients plan for anticipated avoidance. Engage the patient in direct discussions regarding the notion of the avoidance of treatment. Preparing for common avoidance reactions (e.g., I did not sleep well the night before), especially early on in the treatment process, can help patients to overcome their avoidance and attend treatment regularly. For less cognitively sophisticated patients or adolescents, it can be productive to create a name for their avoidance (e.g., "Avoiding John" or "Mr. Avoider") to externalize the symptoms and promote greater awareness of their avoidant tendencies.

A second technique to reduce in-session avoidance is to help patients to identify their side-tracking techniques. More specifically, patients may arrive to therapy motivated to talk about the "emergency of the week," rather than the assigned homework and prescribed in session exercises. Although these attempts are often sincere, they also are powerful avoidant strategies.

One approach to prevent these distractions may be to outline the agenda at the beginning of each session and allocate a brief period for discussion of the past week's events (e.g., 5 min). In addition, another strategy may be to ask at the beginning of each session, "how was your homework?" rather than, "how was your week?" to orient the patient to an agenda item, rather than a distraction.

A third technique to reduce patient avoidance is to make reminder calls for appointments and homework assignments prior to the upcoming session. These reminder calls may help patients to stay oriented toward nonavoidance and provide opportunities for additional positive reinforcement from the therapist. Although potentially time-consuming, reminder phone calls, especially early on in treatment, can help to reduce patient avoidance of treatment sessions and homework assignments, thus, improving the likelihood of efficacious treatment.

6.5.3.2 Expert Competencies of the Clinician

Given the development of basic competencies in treating PTSD, therapists continuing to treat PTSD naturally may gravitate toward expert competencies. These expert competencies build upon basic competencies through the application of advanced practices that require specialized knowledge, skills, and attitudes of the targeted population and specific treatment procedures (Kaslow, 2004). Many EST protocols include room for flexibility to allow for the individual expression of expert therapist competencies within the therapeutic framework (Foa et al., 2007; Kendall, Chu, & Gifford, 1998; Lejuez & Hopko, 2006). Detailed below are three techniques that we have deemed as expert competencies necessary to the treatment of PTSD, including treating co-occurring conditions, using creativity and flexibility in the development of exposure exercises, and crisis management.

Treating Co-occurring Conditions. Similar to patients with other anxiety disorders and depression, patients with PTSD frequently present with comorbid or co-occurring conditions, including high rates of major depressive episodes (48%; 49%), specific phobias (31%; 29%), social phobia (28%; 28%), alcohol abuse/dependence (52%; 28%), drug abuse/dependence (36%; 27%), and generalized anxiety disorder (17%; 15%) in men and women, respectively (Kessler et al., 1995). Thus, one expert competency in the treatment of PTSD involves the incorporation of additional skills and resources from the other EST modalities. These additions to standard EST practices for PTSD may aid in addressing the complex needs of patients with comorbid conditions. For example, some patients with PTSD may be particularly sensitive to the somatic symptoms associated with PTSD or related anxiety disorder. If these sensitivities result in additional distress or avoidance, it may be beneficial to incorporate aspects of interoceptive exposure exercises (Barlow, Craske, Cerny, & Klosko, 1989). These exercises incorporate physical activities, like jogging-in-place or spinning in a chair, to expose patients to the physiological symptoms of anxiety in a safe environment while encouraging habituation and the extinction of these fears. Additional treatments, including exposure with response prevention for obsessive thoughts and compulsive behaviors (Foa & Wilson, 1991), motivational interviewing for substance use disorders (Miller & Rollnick, 2002), and behavioral activation for depression (Lejuez, Hopko, Lepage, Hopko, & McNeil, 2001), may expand the scope of treatment and improve treatment outcome. The ability to identify broader behavioral concepts and appropriately intervene can be more important than closely following any specific treatment

protocol, especially if these changes address the needs of the patient. These practices depend on the use of therapist creativity, flexibility, and ability to create an individual treatment plan for the patient (Kendall et al., 1998). While these and other adjunctive treatment techniques can be helpful, one must take care to provide such interventions in addition to, and not at the expense of, time devoted to exposure-oriented techniques (Foa, Rothbaum, & Furr, 2003). Preliminary research on the treatment of comorbid PTSD and panic disorder and PTSD and substance use disorders has demonstrated promising findings (for review, see Resick et al., 2007).

Using Creativity in Conducting Exposure Exercises. Another expert competency in the treatment of PTSD involves the use of creativity in designing exposure exercises. Creative practices can be applied to both in vivo and imaginal exposure exercises as long as the therapist adheres to the recommended guidelines for exposures. As outlined by Antony and Swinson (2000), the guidelines for conducting an exposure involve: practicing exposures in a planned, structured, and predictable fashion; presenting the exposures at a gradual pace; practicing exposures without subtle avoidance strategies; rating patient levels of fear during the exposure; attempting not to fight the fear during an exposure exercise; practicing exposure exercises frequently and close together; practicing exposure exercises long enough to experience a significant decrease in anxiety; using cognitive coping strategies to counter anxious automatic thoughts during exposure practice; and expecting to feel uncomfortable during the exposure. However, these guidelines provide room for interpretation of, and flexibility in, the exposure practices.

Several examples of uses of creativity in exposures are as follows. In vivo exposures may include the use of actors, props, or technology to increase the level of realism of the exposure exercise. For example, recent developments in virtual reality (VR) exposure practices have demonstrated promising results in patients with PTSD (for review, see Welch & Rothbaum, 2007). These VR simulations include accurate visual, auditory, and even tactile and olfactory cues from the initial traumatic event (e.g., driving armored convoy through Iraq). Creativity also can be adapted to imaginal exposure exercises to help patients to experience their memories in a vivid and sensory-rich manner. All five of the senses should be used in exposure exercises to promote the development of movie-like imagery of the traumatic memories, including cues for the sights, sounds, tastes, smells, and physical sensations. Being creative and vivid with questioning also sends a message to the patient that mastery of all aspects of the memory is vital to, and attainable in, the treatment of PTSD. These creative exercises should carry over into the patient's behavioral homework assignments. The use of audio/video clips, images, driving routes, times of day, or even the weather conditions may help create opportunities to alter and adapt exposure practices to individual patient needs.

Crisis Management. Given the presentation of patients with severe PTSD and the nature of exposure therapy, crisis management skills frequently are needed to maintain order in session and keep the focus on the treatment of PTSD (Foa et al., 2007). Sources of potential crises include comorbid conditions and related suicidality (e.g., depression, substance use, borderline personality disorder), multiple life stressors that lead to chaotic lifestyles and interfere with the development of healthy coping strategies (e.g., social, familial, or financial troubles), and over-engagement or excessive emotional distress elicited by an exposure exercise (e.g., dissociative symptoms or emotionally overwhelmed). Several techniques should be used for crisis management. First, if a patient is over-engaging in an exposure exercise, the exposure procedures should be reversed to reduce immediate distress, but maintain the focus of treatment. For example, in imaginal exposure, a patient may describe the exposure scene in the past tense,

rather than the present tense, or keep their eyes open, rather than closed, to slightly reduce the engagement of the exposure exercise and reduce the associated distress. Second, if comorbid conditions or additional problem areas are identified during the initial assessment, frequent reassessments should be conducted throughout the treatment to monitor progress (e.g., amount of alcohol consumption). If the additional problems are deemed an immediate risk to the safety of the patient, PTSD treatment should be postponed. However, if no imminent risk is identified, treatment should continue in order to improve the anxiety and distress associated with PTSD and, hopefully, also positively impact the comorbid condition (Foa et al., 2007). Once again, the focus of treatment should remain on improving PTSD; however, crisis management skills are a vital expert competency in the treatment of PTSD.

6.5.3.3 Transition from Basic Competence to Expert Competence

Competency-based education focuses on the development of the therapist into an independent, ethical, and effective clinician in a specific, specialty area of psychotherapy (Kaslow, 2004). These goals typically are predetermined and clearly outlined by a governing body or professional society; however, these requirements should not be limited to the acquisition of specified competencies, rather these qualities should emphasize the ability to adapt to change, exhibit sound judgment in challenging situations with conflicting values and ethical issues, generate new knowledge, and continue to learn and improve performance (Fraser & Greenhalgh, 2001).

When these training issues are related to the transition from the basic to expert competencies, several important considerations must be evaluated, including therapist experience, supervision and collaboration opportunities, and the availability of, and exposure to, an eclectic mix of patients and presenting problems. As in any competency-based education, training should be developmentally informed, thereby incorporating increasingly more complicated experiences (Kaslow, 2004). For example, many of the basic competencies can be accomplished through initial assessment interviews with patients with PTSD. Within each interview, a therapist may practice relationship building and conveying the treatment model in a safe, less-intimidating setting. Once mastered in an assessment setting, new treatment patients with uncomplicated presentations of PTSD should be assigned, allowing the therapist to master each of the basic competencies within a treatment setting. Once again, after mastery is accomplished, patients with complicated presentations of PTSD (e.g., patients with comorbid disorders, patients with extreme distress, and patients with severe avoidance) should be assigned to practice the expert competencies. In cases where therapists have minimal prior patient contact, PTSD vignettes should be used to role play therapeutic interactions and practice exposure exercises. Of course, each of these steps should be supervised by an expert in the field of PTSD treatment and occur within a respectful and facilitative learning environment to ensure that acceptable levels of knowledge and skills are developed (Kaslow, 2004).

6.5.3.4 Conclusion

Together, these basic and expert competencies represent a set of skills necessary for the efficacious treatment of PTSD. Although similar to the standard practices for beginning and expert

therapists (Kaslow, 2004), these practices are modified to recognize the specific challenges of working with patients with PTSD. Thus, each competency requires additional attention, training, and supervision to achieve mastery.

6.6   Summary

From its initial definition and frequent revisions in the DSM, the assessment and treatment of PTSD has presented many challenges to clinicians and researchers alike. However, through advances in cognitive and behavioral theory and practice (e.g., Cahill & Foa, 2007; Foa & Kozak, 1986), a number of ESTs has been developed to successfully treat PTSD (Resick et al., 2007). Although the precise mechanisms of change are still uncertain (Benish et al., 2008), both basic- and expert-level clinician competencies, including developing a trusting relationship with appropriate empathy and reflective listening, delivering therapeutic techniques like exposure comfortably and confidently, and applying creativity and flexibility to meet the patient's needs, are common requirements for each of the ESTs. In combination with supervision and collaboration with other experts and awareness of the ever-changing literature, evidence-supported therapeutic practices can be administered competently and effectively to patients with PTSD and related disorders.

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7 Social Anxiety Disorder

Timothy M. Emge · Debra A. Hope

Abstract: Social anxiety disorder is a common and debilitating disorder, often leading to complications such as depression, substance abuse and increased suicide risk. During the past two decades, research on the cognitive, behavioral, interpersonal and physiological aspects of social anxiety and subsequent theoretical models have greatly increased our understanding of the nature and maintaining factors for social anxiety disorder. Well-validated assessment procedures including self-report, interview and behavioral measures, are now available. Therapeutic exposure, typically combined with cognitive interventions, is the most established evidence-based treatment. Comparisons of psychosocial treatment to pharmacotherapy and some promising innovative treatment approaches are discussed as well. Emerging work on mechanisms of change suggest that changes in judgments about the probability and costs of negative outcomes are key to clinical change. Competencies for clinicians include expertise with basic cognitive and behavioral therapies, therapeutic exposure and adaptations for the unique characteristics of social anxiety disorder. Especially important is the impact of socially anxious individuals' fears in interpersonal relationships on the therapeutic relationship. Expert competencies include treatment of more severe cases, overcoming extreme social isolation, complex presentations and social anxiety disorder that presents within the context of serious mental illness. Working in a multicultural context, particularly with language differences and sexual minorities are also discussed. Transition to expert competency relies on traditional educational venues, written material and utilizing expert consultation that is available on electronic venues.

7.1 Overview

Social anxiety, an experience of fear in interpersonal or performance situations, may occur commonly for many people, especially in novel or personally important situations, such as a wedding. However, for most people, the fear is transient and does not significantly interfere with functioning. Individuals who frequently experience high levels of social anxiety and either extreme distress or avoidance of social/performance situations may warrant the diagnosis of social phobia, also known as social anxiety disorder (American Psychiatric Association, 2001, DSM-IV-TR).[1]

Research into social anxiety disorder, which was once one of the least-studied anxiety disorders (Liebowitz, Gorman, Fyer, & Klein, 1985), has increased dramatically over the last 20 years with new insight into its etiology, theoretical framework, and effective treatments. While social anxiety disorder was once considered rarely incapacitating (DSM-III-R; American Psychiatric Association, 1987), it is now known to be associated with impairments extending

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[1] The DSM-IV-TR includes *social anxiety disorder* as an alternative name for *social phobia* in order to underscore its pervasiveness and high level of impairment, as well as to indicate that it is conceptually different from other phobias. In line with this reasoning, this chapter will use the term *social anxiety disorder* when describing clinically significant anxiety in social or performance situations.

beyond social concerns. An early study by Turner, Beidel, Dancu, and Keys (1986) found that high percentages of individuals with social anxiety disorder reported that their functioning in academics and occupation had been hindered by their social anxiety. In comparison with the general population, individuals with social anxiety disorder report significantly more impairment in social functioning and general mental health (Simon et al., 2002). In comparing across anxiety disorders, quality of life is similar for obsessive-compulsive disorder, panic, and social anxiety disorder. As expected, however, social anxiety disorder is associated with more negative ratings for both social and leisure activities (Lochner et al., 2003).

Of individuals diagnosed with social anxiety disorder, 37.2% are found to meet criteria for diagnosis of major depressive disorder and 23.9% meet criteria for alcohol dependence, the only two psychiatric disorders more common than social anxiety disorder (Magee, Eaton, Wittchen, McGonagle, & Kessler, 1996). Longitudinal studies have investigated whether social anxiety disorder acts as a risk factor or develops later as a consequence of depression and alcoholism. In a 10-year, four-wave study in Munich, social anxiety disorder was found to be a stable risk factor for development of future depression, independent of age and gender (Beesdo et al., 2007). In another longitudinal study within the Oregon Adolescent Depression Project (Buckner et al., 2008), individuals with social anxiety disorder and no substance disorders at baseline had 4.5 greater odds of developing alcohol dependence and 6.5 greater odds of developing cannabis dependence, after controlling for age, depression, and other anxiety disorders. This heightened risk was not found with other anxiety disorders or mood disorders.

Approximately 12% of individuals with social anxiety disorder have a history of suicide attempts (Cox, Direnfeld, Swinson, & Norton, 1994). Similar to investigations of comorbidity, data from the 3-year Netherlands Mental Health Survey and Incidence Study (Sareen et al., 2005) were used to determine if the presence of anxiety disorders at baseline increased an individual's rate of suicidal ideation or suicide attempts. After controlling for age, gender, marital status, and Axis I diagnoses including other anxiety disorders, and drug use/abuse, individuals with social anxiety disorder were 2.5 times more likely to have suicidal ideation than individuals without mood or anxiety disorders, though no increase in risk of suicide attempts was found. In a female twin study, Nelson et al. (2000) also concluded that when social anxiety disorder is comorbid with major depressive disorder, there is a substantial elevation in risk of developing alcohol dependence as well as elevation in the risk of suicide-related symptoms.

Social anxiety disorder is the most common anxiety disorder and the third most common psychiatric disorder (Kessler, 1994; Ruscio et al., 2008). Lifetime prevalence estimates vary depending on the breadth of situations assessed as well as the criteria for determining how excessive the fear or avoidance must be to meet criteria (for a full review see Heimberg & Becker, 2002). The most recent National Comorbidity study replication found a lifetime prevalence of about 12% and 12-month prevalence of 7.1% (Ruscio et al., 2008). There appear to be two peaks in the age of onset – before the age of five (individuals who do not remember a time without symptoms) and another between the ages of 11 and 15 (Schneier, Johnson, Hornig, & Liebowitz, 1992). A full 80% of individuals meeting criteria for social anxiety disorder report a date of onset before the age of 20 (Stein & Stein, 2008). While prevalence studies estimate that women outnumber men with a ratio 3:2 (Kessler, McGonagle, Zhao, & Nelson, 1994), treatment studies typically estimate either no gender differences or men outnumber women, suggesting that men are overrepresented in treatment-seeking samples, possibly due to gendered role demands.

Many individuals with social anxiety disorder are not identified by health care professionals and/or do not receive treatment. In a study involving patients who presented with another psychiatric diagnosis to primary care physicians, almost 25% met screening criteria for social

anxiety disorder that was not diagnosed by their physician (Den Boer & Dunner, 1999). In another study, as many as 97% of the individuals with social anxiety disorder were never identified as meeting diagnostic criteria by their primary care physician (Vermani, 2007). Despite well-established treatments discussed below, estimates of how many individuals meeting criteria utilize treatment ranges from 19% in the general population (Schneier, Johnson et al., 1992) to 50% in primary care settings (Gross et al., 2005). In a community-based clinic, only half to two thirds of clients meeting criteria for social anxiety disorder reported their socially anxious symptoms as being the primary reason for seeking therapy (Zimmerman & Mattia, 2000). Despite the high rate of occurrence and significant negative effects of social anxiety disorder, the amount of time individuals experience significant distress before seeking treatment is, on average, 20 years (Davidson, Hughes, George, & Blazer, 1993; Turner et al., 1986). Given this, social anxiety disorder appears to be a chronic disorder with the potential to disrupt social functioning for decades.

7.1.1   Review of Symptoms/Assessment

Symptoms of social anxiety disorder can be conceptualized as revolving around three core domains: cognition, physiological symptoms, and behavioral responses. *Cognitions*: when individuals with social anxiety disorder are compared to nonanxious controls, they report more negative thoughts and fewer positive thoughts (Dodge, Hope, Heimberg, & Becker, 1988; Glass & Furlong, 1990; Turner et al., 1986), they predict a greater likelihood of negative events occurring (Foa, Franklin, Perry, & Herbert, 1996; Lucock & Salkovskis, 1988), and they have unrealistically high standards for their performance in social situations (Lundh & Öst, 1996). Thoughts that may occur during anxiety-provoking situations include, but are not limited to, concerns about the opinions of others, the experience of anxiety itself, and anticipation of poor performance and negative outcomes (Hope, Burns, Hayes, Herbert, & Warner, in press). As will be described further below, social anxiety disorder is also characterized by attentional biases towards cues of social threat (e.g., Hope, Rapee, Heimberg, & Dombeck, 1990) and interpretation biases (e.g., Amir, Foa, & Coles, 1998). *Physiological symptoms* are similar to those seen in other anxiety disorders, including rapid heart rate and muscle tension. When compared to nonanxious controls, socially anxious individuals tend to interpret these sensations as more visible and indicative of extreme anxiety (Roth, Antony, & Swinson, 2001). *Behavioral responses* include behavioral avoidance of feared situations, anxiety symptoms within the situation, such as rapid speech, and safety behaviors. Safety behaviors (Clark & Wells, 1995), are defined as maladaptive coping behaviors that individuals use while in feared situations to reduce anxiety, and include strategies such as limiting eye contact or rushing through oral presentations before feared consequences can occur.

Tremendous progress has been made in the last 20 years in the assessment of social anxiety disorder. A range of strategies and instruments has been developed including client self-report questionnaires, clinician-administered questionnaires and diagnostic interviews, and behavioral assessment. Each will be discussed in turn, with some key examples.

Self-report Measures. Self-report measures range from quick diagnostic screening instruments to extended assessments of anxiety and avoidance across situations to constructs thought to be core to the disorder. The Mini Social Phobia Inventory (Mini-SPIN; Connor, Kobak, Churchill, Katzelnick, & Davidson, 2001) is a three-item self-report diagnostic screening tool that is highly sensitive to detecting the presence of social anxiety disorder and can be readily employed in clinicians' offices. Several self-report questionnaires have been routinely used in

research to assess overall anxiety or avoidance and can be used in clinical practice. The Social Interaction Anxiety Scale (SIAS) and the Social Phobia Scale (SPS) were developed by Mattick and Clarke (1998) to assess the extent and specific types of fears associated with social anxiety disorder. High scores on the SIAS are associated with a greater number of feared social situations, while high scores on the SPS are associated with a greater number of feared performance situations (Brown et al., 1997). Scores on these scales are stable in untreated samples and sensitive to clinical change during treatment. The Social Phobia and Anxiety Inventory (SPAI; Turner, Beidel, Dancu, & Stanley, 1989) assesses social anxiety across a range of situations and is one of the few measures initially developed and validated on a clinical sample. The Brief Fear of Negative Evaluation (BFNE; Leary, 1983) assesses an individual's sensitivity to criticism by others, a central construct within social anxiety disorder (Collins, Westra, Dozois, & Stewart, 2005; Wells et al., 1995). Treatment-induced changes in fear of negative evaluation have been found to be one of the best predictors of long-term symptom reduction (Mattick, Peters, & Clarke, 1989). The BFNE, though subject to some criticism based on its factor structure (Rodebaugh, Woods et al., 2004) and high correlation with the Beck Depression Inventory (Saluck, Herbert, Rheingold, & Harwell, 2000), remains an important tool in assessing long-term treatment outcome. The recently developed Social Anxiety Session Change Index (SASCI; Hayes, Miller, Hope, Heimberg, & Juster, 2008) is a four-item measure designed to be used in routine clinical practice and treatment process research to track session-by-session changes across treatment for key aspects of the diagnostic criteria for social anxiety disorder. Preliminary psychometric data are promising (Hayes et al., 2008).

Clinician-Administered Measures. The Liebowitz Social Anxiety Scale (LSAS; Liebowitz, 1988) measures both fear and avoidance levels in 11 social and 13 performance-based situations, and is highly sensitive to diverse presentations. This measure has good psychometric properties and has also shown to be sensitive to treatment effects (Heimberg & Holaway, 1999). Although originally developed to be administered by a clinician, the LSAS has also been adapted as a self-report measure (LSAS-SR) which shows psychometric properties similar to the original version (Baker, Heinrichs, Kim, & Hofmann, 2002; Fresco et al., 2001; Oakman, Van Ameringen, Mancini, & Farvolden, 2003).

Although popular diagnostic interviews such as the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I; First, Spitzer, Gibbon, & Williams, 1997) and the Mini International Neuropsychiatric Instrument (MINI; Sheehan et al., 1997, 1998) contain sections for social anxiety disorder, the most detailed diagnostic instrument is the Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV; Brown, DiNardo, & Barlow, 2004). The ADIS-IV has high construct and discriminant validity for social anxiety disorder (Brown, DiNardo, Lehman, & Campbell, 2001). The ADIS-IV is ideal for discriminating among anxiety and mood disorders but its lengthy administration time makes it difficult to use routinely in some settings.

Behavioral Assessment. Behavioral assessment of social anxiety disorder typically involves sampling the individual's behavior in feared social situations via direct observation, often of a role-played interaction or performance (McNeil, Ries, & Turk, 1995). Given the well-established biases in self-reports of their own social behavior (Norton & Hope, 2001; Rapee & Lim, 1992; Stopa & Clark, 1993), a behavioral assessment allows the therapist to make an accurate appraisal of the client's performance, visibility of anxiety symptoms, and use of safety behaviors. Behavioral assessment tests can thus be used to either disconfirm negative biases or identify whether a client has a performance/skills deficit or notably obvious anxiety symptom that should be addressed in treatment. As with the other assessment strategies described above,

behavior assessments can be readministered to assess for any reduction in anxiety and improvement in performance during and after treatment. Additional measures such as subjective anxiety ratings and ambulatory physiological data (typically heart rate) can also be taken during behavioral assessments in order to provide information in more modalities.

7.2 Maintenance Factors

Within current conceptual frameworks of social anxiety disorder, there are several factors that are thought to contribute to its chronic nature. The first factor involves safety behaviors, defined above as maladaptive coping behaviors the individual uses to reduce anxiety in anxiety-provoking situations. Examples of safety behaviors include avoiding eye contact to reduce anxiety and participating in a social interaction but avoiding the most distressing parts of it, such as talking only to friends at a party. Safety behaviors are thought to maintain chronic social anxiety disorder by preventing the individual from fully engaging in situations so that they miss the opportunity to learn that their feared outcomes do not typically occur. Since these behaviors are highly effective at reducing experienced anxiety in the short term, socially anxious individuals tend to use them more often and in more environments than nonanxious individuals (McManus, Sacadura, & Clark, 2008).

Second, characteristic biases in attention and interpretation of key social stimuli are cognitive aspects of social anxiety that are thought to help maintain the disorder. Individuals with social anxiety have been found to show increased vigilance towards their own physiological signs of anxiety and performance during stressful situations (Asmundson & Stein, 1994). It is thought that when faced with threatening situations, socially anxious individuals respond by increasing their self-focused attention, away from outside information that may serve to disconfirm their fears (Clark & Wells, 1995; Kimbrel, 2008). At the same time, they maintain vigilance to outside information that confirms their fears. Basic attentional biases toward threat-relevant stimuli, in which individual's attention is drawn to information indicating the presence of negative evaluation, has been found using threat-relevant stimuli in Stroop, dot probe, inattentional biases paradigms, and more naturalistic settings involving the detection of negative evaluation (Hope et al., 1990; Lee & Telch, 2008; MacLeod, Mathews, & Tata, 1986; Mathews & MacLeod, 1985; Veljaca & Rapee, 1998). Other biases exaggerate the likelihood of negative outcomes and overestimate the social cost, if negative outcomes do occur (Amir et al., 1998).

It is important to note that most social interactions do not naturally elicit explicit feedback on performance. Rather, there are ambiguous social cues, such as eye contact, facial expressions, and speed/tone of speech that are interpreted by nonanxious individuals in a culturally appropriate way. Individuals with social anxiety tend to interpret any ambiguous social cue as negatively valenced (Amir et al., 1998; Brendle & Wenzel, 2004) and also catastrophize stimuli that are marginally negative in nature (Stopa & Clark, 2000). When asked to evaluate their own performance, self-ratings are found to be more negative than fellow participant and blind observer's ratings (Alden & Wallace, 1995; Rapee & Hayman, 1996; Stopa & Clark, 1993). Finally, when asked to interpret signs of anxiety during a social task, individuals with high social anxiety interpret their own sensations as indicative of extreme anxiety, though this is not seen when they interpret other's signs of anxiety (Roth et al., 2001).

Safety behaviors and cognitive biases prevent socially anxious individuals from fully engaging in social interactions and prevent accurate processing of social stimuli. Negative predictions

are reinforced as being accurate, increasing future anxiety about the situation (Kashdan & Roberts, 2007; Riskind & Williams, 2006). It is hypothesized that performance may actually be negatively affected in this situation since most cognitive resources are focused on the self instead of the task itself (Clark & Wells, 1995; Rapee & Heimberg, 1997; Rodebaugh, Holaway, & Heimberg, 2004).

The final maintenance factor suggested by Clark and Wells (1995) involves the tendency of socially anxious individuals to ruminate about past and future threatening events. Here, they suggest that since the memories related to feeling highly anxious should be strongly encoded, individuals will find memories of past failures to be particularly salient just before encountering a feared situation. These will then prime individuals to increase their self-focused attention at the potential cost of performance, while looking for confirmatory evidence that the situation is indeed threatening. However, a general memory bias in social anxiety disorder has not been consistently found in the past (Cloitre, Cancienne, Heimberg, Holt, & Liebowitz, 1995; Foa, Gilboa-Schechtman, Amir, & Freshman, 2000; Rapee, McCallum, Melville, Ravenscroft, & Rodney, 1994).

The above processes are also reflected in emotional processing theory of anxiety disorders (Foa, Huppert, & Cahill, 2006; see also Foa & Kozak, 1986). Here, social anxiety is thought to occur when maladaptive fear structures are created that associate stimuli, reactions, and cognitions in a dysfunctional manner. For example, the stimuli can include any event that could be interpreted as having negative social evaluative connotations, such as perceptions of their own anxiety or an audience member yawning. These stimuli become associated with verbal, physical, or behavioral responses, such as rapid speech, more anxiety-related sensations, and avoidance behaviors. As these associations form, two additional cognitive biases occur: an overestimation of the probability of negative evaluation (e.g., I will be laughed at) and exaggerated cost that would follow poor performance (e.g., my boss will fire me). As will be discussed later, change in cost biases have been associated with successful treatment (Foa et al., 1996).

7.3 Evidence-Based Treatment Approaches

Despite the chronic course and high degree of impairment seen in social anxiety disorder, several treatments have been found to be effective in clinical and community studies. Approaches that have shown some evidence of efficacy include a variety of cognitive-behavioral treatments, such as therapeutic exposure, cognitive therapy, applied relaxation, and social skills training, as well as pharmacological interventions including monoamine oxidase inhibitors (MAOIs), selective-serotonin reuptake inhibitors (SSRIs), anxiolytics, and beta-blockers. Of psychological treatments, exposure-based treatments remain the most studied, so they will be the primary focus of this review.

7.3.1 Exposure-Based Interventions

Exposure therapy, effective in other anxiety disorders (Barlow & Beck, 1984), is based on the concept that fear of social situations is maintained by repeated avoidance of these situations. This is disrupted when individuals with social anxiety disorder are instructed to approach feared situations and remain in them until experienced anxiety symptoms decrease.

By experiencing a reduction and eventual absence of anxiety in feared situations, anticipatory anxiety and avoidance decreases as well. Given the prominence of cognitive basis in social anxiety disorder discussed above, early treatment researchers hypothesized that adding a cognitive component to treatment should produce beneficial treatment gains (Butler, 1985). The cognitive component typically targets distorted cognitions regarding feared situations and replaces them with adaptive cognitions, based on Beck's model (Beck & Emery, 1985).

One of the most studied combined cognitive and exposure treatments is Heimberg's cognitive-behavioral group therapy for social anxiety disorder (CBGT; Heimberg & Becker, 2002). Heimberg, Becker, Goldfinger, and Vermilyea (1985) showed CBGT, comprised of imaginal exposure, performance-based exposure during session, cognitive restructuring, and homework involving exposures practiced in group, resulted in significant reduction in several measures of anxiety, which were maintained 6 months later for a majority of participants. In comparing CBGT to a credible attention control group involving education and support, Heimberg, Dodge, Hope, Kennedy, and Zollo, Becker (1990) found that, though both groups improved significantly on multiple measures, the CBGT group improved more on several measures as well as being rated as more improved 6 months later. This difference was attributed to continued improvement on positive and negative self-statements and may reflect continued use of coping strategies learned in CBGT. At follow-ups conducted between 4 and 6 years posttreatment, gains made by individuals who completed CBGT show good stability, with anxiety ratings by the individuals, independent raters, and behavior test judges being closer to nonanxious controls than those who completed the control condition (Heimberg, Salzman, Holt, & Blendell, 1993). In a large study of 133 individuals randomly assigned to CBGT, phenelzine (an MAOI), a pill placebo, or a credible control (educational-supportive group therapy), both CBGT and phenelzine had higher proportions of responders at the end of treatment than the two control conditions, though they were not significantly different from each other (Heimberg et al., 1998).

Although the group format was originally thought to be important to provide opportunities to practice exposures, other studies showed group and individual therapy had similar efficacy (Lucas & Telch, 1993). The primary advantage of group therapy is cost-effectiveness (Scholing & Emmelkamp, 1993). However, many nonresearch settings have insufficient client flow for group treatment, so CBGT was adapted to an individual format (Hope, Heimberg, Juster, & Turk, 2004). In a comparison of the individual treatment based on the manual (Hope, Heimberg, & Turk, 2006; Hope et al., 2004) to wait-list controls, individual cognitive-behavioral therapy (CBT) showed large treatment effects that were maintained at 3-month follow-ups (Ledley et al., in press).

Rodebaugh, Holaway, and Heimberg (2004) identified five meta-analyses (Chambless & Hope, 1996; Fedoroff & Taylor, 2001; Feske & Chambless, 1995; Gould, Buckminster, Pollack, Otto, & Yap, 1997; Taylor, 1996) that examined the effect sizes of cognitive-behavioral treatment for social anxiety, defined as including cognitive restructuring with and without exposure, social skills training, and/or applied relaxation. In these studies, moderate to large controlled effect sizes were found when CBT was compared to wait-list controls. Similarly, moderate to large uncontrolled effect sizes were found when comparing active treatments. Furthermore, treatment gains were maintained at follow-up assessments, between 2 and 12 months following treatment completion. No differences were found between the individual and group treatment (Fedoroff & Taylor, 2001; Gould et al., 1997; Taylor, 1996). There is some evidence that some versions of CBT without exposure, including social skills training, cognitive restructuring, or applied relaxation, result in nonsignificantly smaller effect sizes when

compared to cognitive restructuring combined with exposure (Fedoroff & Taylor, 2001; Gould et al., 1997; Taylor, 1996). Rodebaugh et al. (2004) point out that the nonsignificant differences may be due to insufficient power in these comparison studies.

From these studies it becomes clear that CBT, whether as an individual or a group treatment, is an effective treatment for social anxiety disorder. Since dismantling studies of CBT indicate that exposures are the most important part of CBT (Hope, Heimberg, & Bruch, 1995), it becomes necessary to ask whether the added cognitive restructuring is useful. Evidence from clinical studies is inconsistent. Earlier studies by Mattick and Peters (1988) and Mattick, Peters, and Clarke (1989) indicate that cognitive restructuring, when used with exposure, is associated with more improvement on measures of irrational beliefs and negative self-evaluation, the most improvement on behavioral assessments, and the improvement of social phobic symptoms at follow-up. Meta-analyses, however, do not consistently show CBT to be superior to exposure-alone therapy (Fedoroff & Taylor, 2001; Feske & Chambless, 1995; Gould et al., 1997) though Taylor (1996) indicated that, while CBT was not significantly different from exposure only or social skills training, it did tend to show the largest effect size. The general consensus is that exposure is a key aspect of treatment for social anxiety disorder and likely the most potent aspect of the combined treatment packages.

7.3.2 Cognitive Therapy

One promising newer treatment that emphasizes cognitive interventions rather than exposure is Clark's cognitive therapy for social anxiety disorder (Clark, 1997, 2001). This treatment focuses on disrupting factors that serve to maintain social anxiety by helping clients to understand which behaviors serve to maintain social anxiety, evaluate their performance while dropping these safety behaviors during behavior experiments, reduce self-monitoring, and shift their attentional focus to the external environment. Cognitive restructuring is also used in order to address dysfunctional cognitions that occur both during behavior experiments and during anticipatory rumination (Clark, 1997). Clark et al. (2003) compared this cognitive therapy to SSRI fluoxetine plus self-exposure to approximate routine practice of physicians in the UK, and with placebo plus self-exposure. Assessments at pretreatment, mid-treatment, posttreatment, after three booster sessions, and at 12-months posttreatments included an independent ADIS-IV (Brown, DiNardo, & Barlow, 2004) assessment and six self-report measures. At mid-treatment, cognitive therapy was more effective than both the medication plus self-exposure group and the placebo plus self-exposure group, which were not significantly different from each other. At posttreatment, this pattern was seen again. Additionally, both the cognitive therapy and the medication groups showed significant improvement on all measures, while the placebo group showed improvement only on the composite and six of the seven individual measures. At the end of the booster sessions, cognitive therapy was still superior to the medication group on four of the seven measures, with no loss of treatment effects, while the medication group improved on three measures. At 12-month follow-up, cognitive therapy was again superior to the medication group on four measures, but neither group showed any further treatment gains or loss of established gains. Clark et al. (2003) compared the same cognitive therapy to an exposure plus applied relaxation condition and to a wait-list control group. At posttreatment, both active treatments were superior to the wait-list control

on all measures and behavior tests, and showed significant treatment gains when compared to pretreatment assessments. Additionally, cognitive therapy was found to be superior to exposure plus applied relaxation. At 3-month follow-up, cognitive therapy was superior to the exposure condition on all measures of social anxiety, while at 1-year follow-up this was only seen in five of the seven measures. However, during this follow-up period, 44% of the exposure group sought out additional treatment, compared with 6% of the cognitive therapy group. This cognitive therapy has also been compared to a 3-week intensive group format and a treatment as usual condition (Mörtberg, Clark, Sundin, & Wistedt, 2007). Here, all treatments produced significant reductions in symptoms of social anxiety, and the original cognitive therapy format outperformed the intensive 3-week format and treatment as usual condition, which consisted of some type of antidepressant or benzodiazepine. It is interesting to note that the intensive group produced treatment gains equivalent to 12 months of medication in only 3 weeks.

Although Clark's cognitive therapy includes some therapeutic exposure, the focus differs from the typical combined exposure and cognitive restructuring treatment in that exposures are used as behavioral experiments in service of the cognitive work rather than being a primary mode of treatment. The treatment also emphasizes some specific video feedback that has some empirical support on its own (Harvey, Clark, Ehlers, & Rapee, 2000). Clark's cognitive therapy is promising with large effect sizes. However, there is less evidence that its sophisticated procedures are transportable to other research or clinical settings. In contrast, more traditional cognitive therapy and exposure packages have been successfully demonstrated in numerous locations.

7.4   Exposure Plus Social Skills Training

Similar to the reasoning for dismantling CBT, there is also interest in determining whether adding treatment components would increase the effectiveness of CBT. Since there is evidence that some individuals with social anxiety disorder have deficiencies in social skills and/or anxiety-induced inhibition of social functioning (Hopko, McNeil, Zvolensky, & Eifert, 2001), adding a social skills training (SST) is a theoretically valid addition to exposure-based treatment (Baker & Edelmann, 2002; Stopa & Clark, 1993). SST involves teaching individuals how to effectively use socially appropriate verbal and nonverbal language in interpersonal communication. It has shown to be effective for individuals with high levels of social anxiety (Trower, Yardley, Bryant, & Shaw; 1978) as well as when combined with exposure for social anxiety disorder. (Turner, Beidel, & Cooley-Quille, 1995; Turner, Beidel, Cooley, Woody, & Messer, 1994). Furthermore, 2-year follow-ups show continual improvement (Turner, Beidel, & Cooley-Quille, 1995). To evaluate effectiveness of SST within a CBT framework, Herbert et al. (2005) integrated a psychoeducational component regarding speech content, paralinguistic features of appropriate speech, and nonverbal behavior within Heimberg's original CBGT. Specific target behaviors were chosen for each participant and were practiced within, and outside of, session. In order to allow for adequate time for exposures within session, cognitive restructuring was reduced by approximately 5 min per exposure. Results indicate that the SST integrated CBT treatment was significantly more effective than CBT without SST as well as having a larger effect size than previous studies of CBGT.

7.4.1 **Pharmacotherapy**

In addition to psychological interventions that have been shown to be efficacious in the treatment of social anxiety disorder, there are a number of studies investigating pharmacological treatments as well. In the study discussed above that compared phenelzine to CBGT, a pill placebo, and a credible psychotherapy control group, Heimberg et al. (1998) found that while phenelzine achieved a higher response rate at mid-treatment, the two active treatments were not significantly different at 12 weeks. Furthermore, Liebowitz et al. (1999) found that at follow-up, 50% of the phenelzine responders had relapsed, compared to 17% of the CBGT group. This indicates that while phenelzine may reduce symptoms faster than CBGT, these gains are not maintained once treatment is withdrawn.

A meta-analysis of 24 studies comparing either CBT or pharmacological treatments to control conditions found that treatment effect sizes were not significantly different from each other, 0.74 for CBT and 0.62 for pharmacological, though the lack of follow-up data in many studies prevents comparison of the maintenance of treatment gains between CBGT and medication (Gould et al., 1997). More recent meta-analyses have also found SSRI's to be more effective than placebo at reducing symptoms of social anxiety (Fedoroff & Taylor, 2001; Hedges, Brown, Godfey, & Larcher, 2007). Finally, beta-blockers, though widely used for performance anxiety, have shown little to no effect in the treatment of social anxiety (Turner, Beidel, & Jacob, 1994).

Combining CBT with pharmacological treatment, though useful for certain other disorders (e.g., depression; TADS team, 2007), is only a valid approach if the combination yields greater effects than either treatment alone. It is also possible that combining pharmacological treatment with CBT may inhibit mechanisms of treatment during CBT, since clients may be unable to reach peak anxiety levels during exposures (Otto, Smits, & Reese, 2005). In a meta-analysis comparing CBT, pharmacological treatment, and combination treatment, Foa, Franklin, and Moser (2002) concluded that not only was there insufficient research conducted in this area, but that the studies that had been conducted showed combining treatment modalities conferred neither an advantage nor a disadvantage. In a more recent study, Davidson et al. (2004) conducted a randomized, double-blind, placebo-controlled study comparing comprehensive cognitive-behavioral therapy (CCBT; a combination of exposure, cognitive restructuring, and social skills training) to CCBT with placebo, CCBT with fluoxetine, fluoxetine alone, and to placebo alone. Again, all active treatments were found to be more effective than placebo at posttreatment, but were not significantly different from each other.

Very recent research has begun in the use of the memory enhancer d-cycloserine (DCS) to augment the effectiveness of exposure. This is based on animal studies indicating DCS functions to aid in the consolidation process of learning (Davis, Ressler, Rothbaum, & Richardson, 2006), though it does not do so by increasing experienced anxiety (Bailey, Papadopoulos, Lingford-Hughes, & Nutt, 2007). Hofmann (2007) discusses the biological and psychological mechanisms thought to be affected during exposure therapy and the effect of DCS on these systems. By administering this drug prior to exposure therapy, Hofmann et al. (2006) and Guastella et al. (2008) provide evidence that DCS augments the effectiveness of exposure for social anxiety disorder. Though these results require further replication and comparison to traditional CBT in social anxiety disorder, they represent a promising new direction for improving the treatment efficacy of current therapies.

7.5   Mechanisms of Change Underlying the Interventions

Despite the fact that therapeutic exposure has long been used with anxiety disorders in general with an early emphasis on conditioning models (Mower, 1947), little is known about what learning principles might underlie the treatment. In their review of treatment mechanisms for social anxiety disorder, Heimberg and colleagues (Rodebaugh et al., 2004) conclude that individuals may learn new associations but that old learning does not disappear, based on Bouton's work (Bouton, 2002; Bouton & King, 1986).

Cognitive models of social anxiety disorder highlight a specific pattern of interactions between cognitive biases, physical sensations, and behavioral responses in the maintenance of social anxiety. Rapee and Heimberg (1997) described a model in which socially anxious individuals, who expect negative evaluation from others and perceive this evaluation as highly important, shift their attentional resources away from the task at hand and instead focus on both their mental representations of their performance and on any signs of negative evaluation in their environment. This shift both increases the probability of detecting any signs of anxiety or negative evaluation while increasing the possibility of diminished task performance due to a lack of focus. Their perceptions of their own performance and the evaluations from others also typically include cognitive biases described above. Anxiety results when their perceptions of their performance fall short of what they think their audience expect in the given situation. Probability biases, such that socially anxious individuals expect they will fail more often than nonanxious controls, coupled with a high degree of importance on successfully completing the task, result in anticipatory anxiety as well (Foa & Kozak, 1986). Safety behaviors, such as avoidance or distraction, are often used to temporarily reduce anxiety in the short-term while acting to maintain the disorder in the long-term.

Specific components of current psychological treatments are aimed to target specific maintenance factors in order to interrupt the cyclical nature of the above model. Within CBT, cognitive restructuring serves to address, challenge, and correct probability biases, cost biases, and dysfunctional core beliefs that are present when threatening situations are encountered. The end results are realistic evaluations of several elements of threatening situations, including competency of performance, likelihood of others noticing anxiety symptoms, the likely outcome if failure occurs, and less global dysfunctional core beliefs. Exposure, during which an individual's anxiety levels rise to a peak during stressful tasks and then allowed to decrease over time without safety behaviors or avoidance, is thought to function by moderating the cost biases associated with the task. Using Foa and Kozak's (1986) theory of emotional processing, exposures conducted in this manner act to first activate fear structures by inducing anxiety symptoms in feared situations. As anxiety symptoms decrease naturally, the individual is able to reevaluate the cost of remaining in the feared situation in an adaptive way. Exposure also acts to introduce contrary evidence to fear structures, such that an individual must incorporate a reduction of anxiety into associations with feared situations, thereby breaking the strong association of fear and the situation itself.

These theoretical accounts of the mechanisms of change have only recently become the focus of study. Several studies have found that changes in judgment biases are related to treatment outcome. Foa et al. (1996) and Hofmann (2004) both found that reductions in cost bias (high cost if feared social outcomes occur) were related to treatment outcome. In contrast, reduction in probability bias (likelihood of feared outcomes) accounted for clinical change in McManus et al. (2000). Change in cost bias was unrelated to outcome after accounting for

probability bias in McManus et al. In the most sophisticated study to date, Smits, Rosenfield, McDonald, and Telch (2006) examined within and across session change in cost and probability bias in a three-session intensive exposure-based treatment of public speaking anxiety. Their analyses clearly showed reduction in probability bias is the most likely treatment mechanisms.

7.6 Basic Competencies of the Clinician

None of the research on psychosocial treatment of social anxiety disorder has examined what type or level of therapist training is necessary to achieve good outcomes. Nor has research focused on therapist characteristics, background, or experience that might be ideal. However, in 2 decades of conducting these interventions and training therapists with various backgrounds, there are numerous key points of competence that we have identified. The discussion of competencies makes some assumptions that are important to identify first.

One assumption made in the discussion of competencies is that the therapist has general competency in cognitive-behavioral interventions. Although what this might specifically mean could fill a volume on its own, in general it is assumed that the following are true:

(a) The therapist is able to conceptualize cases from a cognitive-behavioral perspective (Persons, 2008).
(b) The therapeutic relationship is collaborative (Beck, 1995).
(c) The therapist is able to engage in fundamentals of cognitive-behavioral therapy such as effectively using homework (Tompkins, 2004), self-monitoring, and psychoeducation.
(d) The therapist monitors the client's progress and adapts the treatment as needed to maximizes outcomes (Persons, 2008).

The second assumption is that the therapist has general competency in psychological interventions including skills such as establishing rapport, conducting a clinical interview, managing session time, making a proper diagnosis, etc. Again, a full discussion of these competencies is beyond the scope of this chapter.

7.6.1 Exposure and Cognitive Restructuring

As was apparent in the review above, the fundamental component of the psychosocial interventions with the most scientific support is therapeutic exposure. Various sources describe how to conduct exposure for treatment of social anxiety disorder (Heimberg & Becker, 2002; Hope et al., 2004, 2006; Turner, Beidel, & Cooley-Quille, 1997). Therefore, the first basic competency is the ability to conduct exposures, including developing a hierarchy and adapting the exposures as needed based on individual client needs. In most of the research protocols, the exposure is graduated and includes both role-played or in-session exposures and in vivo exposure.

Most of the psychosocial interventions with strong scientific support also include a cognitive therapy component, typically identification and rational analysis of dysfunctional thoughts based on the work of Beck (e.g., Beck & Emery, 1985). The second basic competency is the ability to integrate cognitive restructuring with therapeutic exposure. Therapeutic exposure

provides an excellent opportunity for cognitive restructuring by activating the anxiety-related cognition and providing an opportunity to gather disconfirming information to challenge irrational cognition. Thus, the second basic competency is to capitalize on the reciprocal process of anxiety-eliciting exposure and cognitive intervention.

These first two competencies reflect the basic treatment components. The following basic competencies include aspects of treatment in which the psychopathology of social anxiety disorder interacts with treatment to create unique challenges.

7.6.2 Managing the Therapeutic Alliance

The therapeutic relationship is an interpersonal relationship, albeit with certain legal and ethical obligations due to its unique nature. Clients with social anxiety have a disorder that specifically impairs interpersonal relationships, adding additional challenges to psychotherapy. Individuals with social anxiety disorder are, by definition, highly fearful about interpersonal evaluation. This can play out in the therapeutic alliance in a number of ways. First, socially anxious individuals are hypersensitive to cues of negative evaluation and, as noted above, are prone to negatively misinterpret minor negative or even neutral cues (Clark & Wells, 1995) from the therapist. For example, a therapist's inquiries over whether a client read assigned psychoeducational material may be perceived as criticism by a socially anxious client when a nonanxious client would understand that the therapist is simply trying to ascertain what material needs to be reviewed in session. Furthermore, because fear of negative evaluation often limits assertiveness (Holt, Heimberg, Hope, & Liebowitz, 1992), the clients would be unlikely to defend themselves against perceived, but unintended, criticism.

It is impossible for a therapist to guard against all possible triggers of negative evaluation fears with socially anxious clients and it would probably not be therapeutic to do so anyway. However, one does not want this fear to lead to behavioral avoidance of the therapy sessions. One basic competency is for the therapist to have heightened awareness of how he or she will be perceived by the client and to closely monitor the therapeutic alliance for ruptures. Heightened attention to nonverbal communication and mismatches between the client's verbal and nonverbal behavior will help therapist detect when their messages are poorly received.

If a client's fear of negative evaluation is evoked by the therapist unintentionally, then it can typically just be handled within the treatment model. Rather than simply offering reassurance, the therapist can gently help the client evaluate the evidence that a negative evaluation was intended by the therapist or that the client did something wrong, or at least something that was important. This can be an emotionally intense discussion for clients so it should not occur frequently and should end with the therapist confirming that the more benign explanations that were generated are what were intended. The benefit of such a discussion can quickly spiral downward if the client then perceives another error for their original misperception, so normalizing their reaction (e.g., "This sort of thing often happens as we work our way through this treatment.") can help draw the discussion to a close.

Certainly every therapist–client pairing is unique and each pair will find their own way of working together. However, a general approach that is gentle and collaborative often works

well. Irreverence and humor that might be ideal with certain clients is unlikely to be effective with socially anxious individuals.

7.6.3 Tolerating Client's Affect and Identifying Avoidance Strategies

A basic skill in training for mental health professionals is to tolerate client's experience and expression of negative affect in the session. Exposure-based treatments for anxiety disorders, including social anxiety disorder, demand this skill because the goal of treatment is to induce anxiety via therapeutic exposure. Inexperienced therapists may understand this intellectually but then accept as true a client's irrational cognition that anxiety is bad and that they will not be able to tolerate experiencing it. A basic tenet of exposure-based treatment is that anxiety will rise, plateau, and then habituate, if one fully engages with the feared stimuli. Therapists need to trust this as well and allow clients to fully experience their anxiety, without distracting them or interrupting the experience. The key is to pick exposure situations on a graduated basis so that the anxiety is not overwhelming and then join the client in tolerating the anxiety evoked by the exposure. An inexperience therapist who is not confident in their skills with exposure-based therapy may well have higher anxiety than their clients during the first exposure sessions they conduct. Such therapists should use the cognitive restructuring skills to address their own dysfunctional thoughts about conducting exposure.

Because the motivation to avoid or escape feared situations is so strong, clients will often use subtle and not so subtle methods of avoiding the experience of anxiety in session. Therapists who are uncomfortable with client's affect may collude in this pattern of behavior. However, clients can also be very subtle with avoidance and the therapist must be able to distinguish avoidance behavior from other events. When facing an impending exposure, clients may suddenly have other issues that are more pressing than their social anxiety, they may start asking questions about the treatment procedures, or they may schedule themselves, so they may have to leave the session early. An astute therapist can identify avoidance when it occurs and gently confront it.

7.6.4 Effective Psychoeducation

Psychoeducation about the nature of social anxiety, explaining the rationale of treatment and helping the client develop anxiety management skills such as cognitive restructuring all require a teaching component in cognitive-behavioral therapy. Reading materials and worksheets can help communicate this information and many clients will be able to get the primary information through at-home reading. However, these materials are most effective, if they can be shared in an interactive fashion so that the client understands how the concepts apply to themselves. Beginning therapists often have difficulty covering psychoeducational material without lecturing to clients. Socially anxious clients may find therapy itself an anxiety-provoking experience and encourage a lecture by taking on a passive role in psychoeducational sessions. A more skilled therapist can review the material interactively, especially if the client has done some background reading or self-monitoring ahead of time. Ideally, a discussion can develop in which the therapist highlights the primary topics with the client offering personal examples. A skilled therapist may also be able to draw the material out of the client to illustrate key points, and then just provide some vocabulary to describe the experience or put the client's experience in a conceptual model.

7.6.5   Knowledgeable About Social Anxiety Disorder

As with any presenting problem, there is no substitute for the therapist having basic knowledge of the psychopathology literature for social anxiety disorder. Even 20 years ago, most therapists knew very little about the disorder. Research was so lacking that in 1985 Liebowitz et al. called social anxiety the "neglected anxiety disorder" (Liebowitz et al., 1985). Clearly, that is no longer the case. However, clinicians who were trained more than 20 years ago may not have had much exposure to the psychopathology and treatment literature for social anxiety disorder, unless they have pursued continuing education on the topic. There is a number of reasons that knowledge of psychopathology literature is helpful in treatment. First, making an accurate diagnosis requires knowledge of the diagnostic criteria with a mental representation of a prototypical case to guide diagnostic decision making. Second, understanding the common cognitive biases will keep the clinician from being misled by a socially anxious individual's distorted evaluations of their own and others' behavior in social interactions. Third, understanding maintaining factors in the disorder such as behavioral avoidance and safety behaviors will alert the clinician to needed treatment targets as well as client activities that might sabotage treatment.

7.6.6   Conducting Treatment with Clients with Concurrent Pharmacotherapy

Many clients who come for psychosocial interventions do so, in part, because pharmacotherapy is problematic or yielding partial remission of their social anxiety. Others may start, or consider starting, a pharmacological intervention in the course of treatment. All of these types of cases present challenges to a clinician conducting cognitive-behavioral therapy for social anxiety disorder. Treatment outcome studies typically eliminate individuals who are already taking medication or require that medications and their dosages be stabilized for the course of the clinical trial. Such restrictions are usually not part of a nonresearch practice, leaving limited empirical data on CBT concurrent with a changing medication regime.

Given that the research literature reviewed above suggests CBT and certain medications are similarly effective for social anxiety disorder and there is no evidence of added benefit of combined CBT and pharmacological treatment, then best practice would suggest it is prudent to initiate one treatment, determine whether it is helpful and then add the other treatment only if necessary. Whether the first-line treatment is CBT or medication depends upon the availability of the treatments, the client's inclination and any factors which may contraindicate one of the treatments (e.g., medical problems may contraindicate medication; low motivation may contraindicate CBT). (See Rodebaugh and Heimberg (2005) for a further discussion of combined treatment).

For clients receiving concurrent medication and CBT, a number of areas of therapist competency is important. If the person conducting the CBT is not the prescribing physician, then it is essential that the CBT therapist coordinate treatment with the prescribing physician. The lack of assertiveness common in social anxiety (Holt, Heimberg, Hope, & Liebowitz, 1992) likely means that a therapist cannot depend upon a client to communicate between different providers, especially early in treatment. A normal course of CBT means that anxiety levels will increase as the individual reduces avoidance. This could be misinterpreted as deterioration by a prescriber, prompting a change or increase in medication at a crucial point in therapy. Similarly, other providers may work at cross-purposes inadvertently. For example, avoidance

behavior may be recommended as a coping strategy when the CBT therapist is encouraging a client to face their fears.

Another important competency is managing client's attributions for change. The cognitive biases in social anxiety may mean that a client attributes all change to medication and none to their own efforts, despite clear evidence to the contrary. Cognitive interventions can be used to address such distorted thinking (Beck, 1995).

7.6.7 Treatment with LGB Populations

Members of the lesbian, gay, and bisexual community (LGB) have been found to exhibit higher levels of fear of negative evaluation and social interaction anxiety than the general population (Pachankis, & Goldfried, 2006). Coupled with above average utilization rates of psychotherapy (Liddle, 1996; Morgan, 1992; Bradford & Ryan, 1988), therapists should expect to see LGB clients at some point in their career. While recommendations for general competencies in conducting therapy with LGB clients can be found elsewhere (Pachankis & Goldfried, 2004; Walsh & Hope, in press), there are several competencies specific to social phobia. First, in terms of diagnosis, it is important to determine the basis of the fear of social/performance situations the client is reporting. For instance, a client who is afraid of public speaking because others will think signs of anxiety are indicative of failure/inadequacy is very different from a client who is afraid of public speaking because the audience will make assumptions about their sexuality. If the latter is the case, a diagnosis of social phobia should not be given if the client does not recognize the fear as unreasonable or excessive. For example, if LGB clients are afraid that job loss will result from revealing their sexual orientation, the therapist should keep in mind that this may be a very real consequence, occurring in many places with no legal recourse as there is no federal nondiscrimination in employment protection based on sexual orientation (Human Rights Campaign, 2009). This suggests the implementation of a modified treatment approach, such that cognitive restructuring focuses on identifying the actual versus perceived likelihood of these consequences and examining the evidence to contradict negative automatic thoughts (e.g., will absolutely no one like you if they find out you are gay?). Throughout this, the therapist should recognize that there is the possibility that some fears, such as familial estrangement or hate-crime victimization, may be wholly justified and even adaptive in nature. If the fears are found to be particularly adaptive, then challenging them may be detrimental to the client.

7.7 Expert Competencies

7.7.1 Comorbid Disorders

Social anxiety often occurs in the context of another disorder. Studies show 56.7% of individuals who seek treatment for social anxiety also meet diagnostic criteria for another disorder (Magee et al., 1996). Often additional diagnoses are anxiety disorders but social anxiety disorder may also be present with individuals with serious mental illness such as bipolar disorder or a psychotic disorder. In these latter cases, appropriate treatment for the primary disorder must occur first. However, once an individual is stabilized, it may be important to treat social anxiety to facilitate participation with treatment programs and improve long-term social functioning.

These cases require the clinician to have expertise with the best cognitive-behavioral treatments for bipolar disorder or psychotic disorders as well as expertise in treating social anxiety in order to blend the intervention into an effective hybrid.

There are several ways in which exposure and cognitive restructuring for social anxiety disorder must be adapted. First, exposures must be conducted in such a way that they are not unduly stressful to trigger a relapse in symptoms of the primary disorder. This can be done by progressing more slowly or adding some coping skills or medication to help moderate the anxiety response. Second, the therapist must to able to distinguish cognitive symptoms that are a function of the primary disorder, not the social anxiety. For example, with an individual with schizophrenia, this may include disentangling thoughts that are part of a paranoid delusion from socially anxious thoughts about negative evaluation by others. Third, the therapist must be able to adjust the pace of treatment to suit the client's level of functioning. Many clients with serious mental illness have cognitive deficits that will necessitate streamlining or spending more time on psychoeducational material or coping strategies.

7.7.2 Avoidant Personality Disorder

There has been substantial controversy over the years about the relationship between avoidance personality disorder (APD) and social anxiety disorder. Evidence suggests that individuals who meet DSM criteria for both disorders have more severe symptoms than individuals with only social anxiety disorder, but that the trajectory of change in cognitive-behavioral treatments is similar (Herbert, Hope, & Bellack, 1992). This suggests that treatment may need to be longer for these comorbid cases. Our clinical experience suggests that individuals with APD may be more likely to react with anger, the "fight" aspect of the "fight or flight response," when challenged to face their fears. Such anger can be disruptive to the therapeutic alliance but can be processed much as one would process attempts to avoid facing fears in standard exposure treatments.

7.7.3 Ethnic Minority Clients and Language Differences

While there has been little research regarding the effectiveness of exposure treatment for social anxiety disorder in the North American ethnic minority groups per se, there is some evidence that certain minority groups delay treatment for mental health problems in general, including social anxiety (Bui & Takeuchi, 1992; Hsu & Alden, 2008; Zhang, Snowden, & Sue, 1998). A full discussion of multicultural competency is beyond the scope of this chapter but cultural variations in social behavior should be considered in diagnosis and treatment. One consideration that should be noted is that frequency and presentation of nonverbal skills often vary depending on the client's cultural background and level of acculturation. For this reason, certain behaviors (e.g., avoidance of eye contact, unassertive posturing, etc.) should not necessarily be noted as symptoms of social anxiety disorder. Instead, they should be considered within the larger framework of the client's cultural background. Similarly, verbal and nonverbal behavior that is elicited or encouraged in exposure should be culturally appropriate otherwise the client's heightened anxiety may be a functional alarm of a violation of cultural norms.

In an increasingly interconnected and diverse world, it is not uncommon for a therapist to be working with a client who does not share the same primary language. Usually therapy is conducted in the therapist's primary language and it is expected that the client will be sufficiently fluent to benefit from the services. Subtleties of language that emerge in cognitive restructuring can be a challenge for nonnative speakers. The therapist must take care to insure that communication is clear and accurate. Treatment usually involves written records for homework for exposure and cognitive restructuring. Although some clients resist the idea at first, we have typically had clients do this work in their primary language and then translate as needed for the therapist in session. Working in the primary language is especially important later in treatment when cognitive interventions may be focusing on core beliefs and processing historical events and/or key familial messages that underlie dysfunctional expectations and standards of behavior. Issues about language with a client must be handled with sensitivity and reference to the case formulation as confidence in the language of the majority culture and/or handling prejudice and discrimination may also be aspects of the individual's social anxiety.

7.7.4 Client Has a Noticeable Impairment

Most individuals who seek treatment for social anxiety greatly overestimate their deficits in social situations (Norton & Hope, 2001). However, occasionally an individual seeks treatment due to heightened anxiety and self-consciousness about an impairment that is readily visible to others and may actually lead to some negative social evaluation. Such impairments may include stuttering, disfigurement, or physical impairments such as a limp or cognitive disability following a traumatic brain injury. In such cases, treatment as usual must include helping the individual make a realistic assessment of social impact of the impairment. Therapeutic exposures to a range of possible reactions by others are needed so that the client has a clear coping plan for likely scenarios. Cognitive interventions will likely also focus on giving the impairment a functional and realistic weight in the client's overall self-evaluation, rather than having the impairment as a primary defining feature of his or her self-identity.

7.7.5 Client Has Severe and Noticeable Physiological Symptoms of Anxiety

Individuals with social anxiety disorder are concerned that their anxiety will be visible to others (Hope et al., in press; Clark & Wells, 1995), but typically symptoms are not as visible as feared. Occasionally, individuals who present for treatment have highly apparent symptoms such as blushing, sweating, or tremor (Bögels, 2006). Any physical causes for such symptoms should be evaluated and treated first. Treatment in these cases must be two-pronged. First, treatment as usual should proceed with the hope that decreased anxiety will result in less frequent or less intense symptoms. Second, the symptom can be handled as described above for noticeable impairments. With symptoms which may change over time, the intervention should also include realistic assessment of the likely occurrence of the symptom, its visibility and likely

reactions by others if it does occur. If a symptom persists, then the clinician should investigate whether there are specific interventions for that particular symptom such as task concentration training for blushing (Bögels, 2001). The sources discussed below for transition to expert competency can be used for such searches.

7.7.6 Rapid Treatment

In research protocols, psychosocial treatment for social anxiety involves 12–16 weekly sessions. There is no research on whether this is ideal scheduling or duration for the treatment and occasionally individuals present for treatment who need to progress much more quickly due to an upcoming event. Certainly, sessions can be scheduled more frequently and the exposures can be tightly focused on the key upcoming event. Given the data reviewed above indicating that exposure is the most important element in combined treatment packages, rapid treatment should focus primarily on exposure with limited cognitive interventions. It is also possible to engage the client in the most challenging exposures sooner, rather than the traditional graduated approach. Flooding was a common approach in early exposure-based treatment for anxiety disorders (Barlow, 2001), but was largely abandoned because it is so difficult to tolerate. There is no known research on flooding as an intervention for social anxiety disorder. However, data with other disorders suggest no reason it would not be effective. Flooding exposures must be carefully calibrated so that the client does not escape and refuse to reengage, leading to possible iatrogenic effects. Before engaging in any rapid treatment plan for social anxiety for a specific upcoming event, therapists should also evaluate whether medication alone or combined with the rapid treatment should be considered. For anxiety in an infrequent event, especially in the absence of other clinically significant social anxiety, evaluation for an anxiolytic medication that can be taken only for the event itself may be the most efficient treatment option.

7.7.7 Lack of Social Network for In Vivo Exposures

Individuals with more severe social anxiety disorder or who have other comorbid diagnoses may have avoided social interactions for such a long time that they have a very limited social network. Such individuals may live alone, be unemployed or work at job that require little social interaction and have few friends or acquaintances. It will be difficult for them to overcome their social anxiety if they have little opportunity to practice. Therapists treating such cases will need to have extensive knowledge of specific local resources for potential friendships or dating partners. As many individuals with several social anxieties also experience economic hardship (Schneier, Hornig, Liebowitz, & Weissman, 1992), it is important that these resources include many that have little cost. Examples include volunteer positions, welcoming religious groups, adult education classes, and groups with a specific focus such as single parents or a shared cultural heritage. Certainly, the client can and should pursue the opportunities on their own, but therapy is greatly facilitated if the therapist can direct him or her towards an experience that is likely to be welcoming and successful.

7.7.8 Exposure Failure

Despite a therapist's best efforts, occasionally a therapeutic exposure will not go as planned and could be considered a failure in some way. A failed exposure would occur when the client refuses to engage in the exposure or escapes early, the client experiences confirmation that their worst fears are true or the client has an experience that has some significant social cost such as the loss of a relationship. It is the therapist's responsibility to choose exposures of appropriate difficulty and to direct therapy in a manner that limits the likelihood of negative consequences for the client. If an in-session exposure takes an unexpected turn in a nontherapeutic direction, the therapist needs to end or redirect the exposure as skillfully as possible. Any escape or avoidance should be addressed immediately and the client should be helped to enter a less threatening situation as soon as possible to avoid setting up a pattern of avoidance. The more avoided situation should be faced later. Very often aversive experiences for the client can be handled in cognitive restructuring by honestly agreeing that the experience was aversive, but then highlighting either the low probability of such an event happening again or the coping resources that the client can or did use.

7.7.9 Panic Attacks

Approximately 57% (Jack, Heimberg, & Menin, 1999) individuals with social anxiety disorder experience panic attacks in social situations. Most often these panic attacks do not require special intervention as the primary fear is of negative evaluation by others, not catastrophic misinterpretation of the symptoms as is found in panic disorder (Hofmann & Barlow, 2004). However, if comorbid panic disorder is present or the panic symptoms are especially bothersome, then techniques to manage the symptoms such as diaphragmatic breathing or cognitive therapy directed at the interpretation of the symptoms (Barlow & Craske, 2006) may be warranted. A full-blown case of panic disorder may require separate treatment that should be conducted before or after the treatment for social anxiety, depending upon the relative severity and specific needs of the case.

7.7.10 Cognitive Deficits that Interfere with Cognitive Therapy

Cognitive restructuring requires verbal proficiency and the ability to engage in logical analyses of the assumptions underlying key cognitions. At the most advanced level, it requires seeing common themes across multiple situations and the ability to engage in a self-regulation process to systematically think differently in the midst of anxiety-provoking situations. Many individuals who seek treatment for social anxiety do not have these skills due to limited intelligence, a traumatic brain injury, or other cognitive impairment. Such difficulties become readily apparent during the initial sessions when cognitive restructuring skills are introduced. An expert therapist should recognize what, if any, aspects of the cognitive work will be useful and rely more heavily on the exposure component of treatment. In many cases, the early cognitive work will yield a generic coping statement that can be used to help the client motivate themselves to engage in exposure without extensive analyses of negative thoughts in each specific situation.

7.8   Transitioning from Basic Competencies to Expert

Basic competency in cognitive-behavioral treatment for social anxiety disorder can be achieved via a combination of resources. These include reading books, chapters, and journal articles, practicing implementing treatment manuals and attending clinical workshops. Ideally, a novice clinician would also obtain clinical supervision by an expert in treatment of social anxiety. Learning the specific intervention is probably best achieved by first treating straightforward cases of no more than moderate severity without significant comorbid disorders. However, an expert clinician in one disorder (e.g., schizophrenia) is likely to develop skills in treating social anxiety as a secondary problem concurrent with that disorder.

Published reports of treatment studies are almost always based on adherence to a written treatment protocol. Although average clinicians outside of a research setting likely adapts such protocols to their own style and setting, our experience in training novice clinicians suggests that there is a benefit to learning the protocols as written first. Treatment protocols reflect a treatment program that has been carefully developed by experts in the disorder and was designed to maximize treatment outcome, as best as possible given current state of knowledge. Clinicians who wish to match the outcomes achieved in published studies should strive to conduct a similar treatment. Once the clinician has achieved proficiency in the treatment as it was designed, then experimentation with local adaptations can be attempted, carefully collecting data on client progress and satisfaction to determine whether the adaptations actually improve outcomes. If a clinician follows this process and finds useful adaptations, then there are several practice-oriented journals such as *Cognitive and Behavioral Practice* that welcome publication of such findings.

If clinical supervision or consultation is not available, then a clinician working in a more isolated situation could practice following one of the established treatment protocols, carefully tracking client progress with commonly used measures of social anxiety and comparing progress to published data, especially the numerous published case material (Chambless & Hope, 1996). These case reports tend to provide ongoing individual data, rather than just pretreatment and posttreatment group means.

If a novice clinician is having difficulty implementing treatment or is not achieving the expected client outcomes, then there are several resources available. First, the clinician could explore whether there are colleagues in the geographical area who have expertise in treatment of social anxiety disorder who might be available for formal or informal consultation. Local professional organizations often have referral lists that include areas of competence. National organizations such as Association for Behavioral and Cognitive Therapy (ABCT) and Anxiety Disorders Association of American (ADAA) have web-based referral systems that could be used to locate a local expert. Second, a clinician could post questions to relevant listservs to seek consultation. ABCT, for example, has a members' listserv that includes frequent discussions of clinical issues. This strategy broadens the available consultants well beyond the local geographic area. Third, a clinician could use one of the above strategies to find an established expert in a particular treatment who would have information on available training. Most developers for treatment programs conduct workshops as part of their dissemination efforts.

As a clinician gains more experience treating social anxiety, then it is time to move to more complex cases. All of the strategies and resources mentioned above can be used to develop this higher level of expertise. In fact, listsevs are frequently used by even expert clinicians to consult

on complex cases, especially when there is a need to design an idiosyncratic exposure situation. Ongoing assessment of client progress will help the clinician determine whether treatment is working as intended and provide feedback on what does and does not work, leading to further refinement of skills.

The transition from novice to expert in the treatment of social anxiety is likely to be facilitated if that clinician is treating a variety of anxiety disorder cases using the best evidence-based treatments. There are many similarities across the anxiety disorders, as noted by contemporary theories emphasizing the commonalities (Barlow, 2001). Indeed, there are some efforts to develop treatments that would span the disorders rather than a separate protocol for each anxiety disorder (Allen, McHugh, & Barlow, 2008; Norton & Hope, 2005). Although such cross-disorder protocols are not the first-line treatments, a quick perusal of established cognitive-behavioral interventions indicates that all include therapeutic exposure, anxiety management techniques (often cognitive restructuring), and strategies to overcome avoidance behavior. Thus, it seems likely that experience gained from treating panic disorder or obsessive-compulsive disorder, for example, is likely to generalize to treatment of social anxiety disorder.

7.9   Summary

Social anxiety disorder is a common, chronic anxiety disorder, starting early in life and often leading to significant impairment in functioning. The last quarter century of research has resulted in a good understanding of the psychopathology of the disorder and leads to the development of several effective treatments. More recently, theoretical and empirical work has started to disentangle the effects of psychosocial treatments in order to better understand some of the mechanisms of change. A clinician seeking to become competent in treating social anxiety disorder can draw upon a number of resources including published treatment manuals, a significant body of clinical literature and access to experienced providers via professional associations and the web. Because social anxiety impairs the interpersonal relationships, it presents some unique challenges to therapists. We have tried to describe those challenges and offer suggestions for overcoming them. Because cultural factors play a large role in social exchanges, cultural competency is particularly important, as described above. Social anxiety disorder occurs at a broad range of severity and comorbidly with serious mental illness, which can offer interesting and rewarding challenges for expert providers as well.

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8 Schizophrenia

Jennifer D. Gottlieb · Kim T. Mueser

Abstract: Despite the often grave consequences of schizophrenia, in recent years several types of treatments have gained empirical support as helpful interventions to ease symptoms and improve functioning, including some antipsychotic medications, supported employment, assertive community treatment, integrated treatment for dual disorders, cognitive-behavioral therapy, family psychoeducation, illness management and recovery, cognitive remediation, and social skills training. The successes of these interventions have created evidence-based hope that schizophrenia is a condition that is manageable, treatable, and from which recovery is a very realistic possibility.

In this chapter, the authors first provide a summary of the elements of the aforementioned empirically-supported interventions for schizophrenia, and then discuss important basic skills that clinicians must develop in order to provide practical and effective treatment for this population, which include the adoption of a recovery and strengths-based, shared decision-making philosophy, knowledge about specific symptoms and impairment related to schizophrenia, solid assessment skills, the ability to elicit the client's natural supports, engage with the family, and interact well with an interdisciplinary treatment team. Additional basic skills in motivational enhancement, cognitive-behavioral therapy techniques, and the delivery of psychoeducation are also highlighted. Specific expert competencies are detailed, and the authors posit that skill in these interventions can significantly improve client outcomes, Strategies and resources for clinicians to gain expertise in specific treatments of interest for this disorder are discussed.

Finding opportunities for real-world practice and delivery of these practical and evidence-based treatments, coupled with ongoing supervision and consultation with a trained clinician, can have a tremendous effect on clinicians' abilities to deliver these important interventions, while conferring significant benefits to clients with schizophrenia over time.

8.1 Overview

Schizophrenia is a severe mental illness characterized by psychosis, apathy and social withdrawal, and cognitive impairment which results in problems functioning at work, in school, parenting, self-care and independent living, and interpersonal relationships. Schizoaffective disorder and schizophreniform disorder along with schizophrenia are often grouped together as schizophrenia-spectrum disorders. Diagnostic criteria for these three disorders are similar, genetic studies suggest shared vulnerability to all of them, and the same treatments are effective. Although we refer to schizophrenia in this chapter, the same information is applicable to the other disorders.

Schizophrenia is one of the most disabling psychiatric disorders and its treatment requires a disproportionate share of mental health services. For example, people with schizophrenia

occupy approximately 25% of all psychiatric hospital beds (Terkelsen & Menikoff, 1995) and, due to the episodic nature of the disorder, account for approximately one half or 50% of the inpatient admissions (Geller, 1992). The combined economic and social costs of schizophrenia place it among the world's top ten causes for disability-adjusted life years (Murray & Lopez, 1996), accounting for an estimated 2.3% of all burdens in developed countries, and 0.8% in developing economies (U.S. Institute of Medicine, 2001).

Schizophrenia usually has an onset in late adolescence or early adulthood, usually between the ages of 18 and 35. However, schizophrenia can also develop later in life, even after the age of 50, with a similar clinical presentation and psychosocial impairment (Howard, Almeida, & Levy, 1994; Howard et al., 1997). It is extremely rare for schizophrenia to develop before adolescence, and when it does, it is considered a different disorder (Cottone & Kumra, 2008).

The course of schizophrenia is usually an episodic one, with severity of symptoms fluctuating over time, and inpatient treatment is sometimes necessary for acute exacerbations when symptoms present a danger to the person or others. Most people who develop schizophrenia continue to experience symptoms and psychosocial impairments throughout their adult lives. However, longitudinal studies of the long-term course of schizophrenia have shown that a significant proportion of people experiences either partial or complete remission of the illness later in life (Harding, Brooks, Ashikaga, Strauss, & Breier, 1987a, b; Harrison et al., 2001; Tsuang & Winokur, 1975). Recognition that the long-term course of schizophrenia is not always chronic, as well as the fact that people with the disorder are capable of leading worthwhile and rewarding lives, has led to the concept of recovery being redefined from remission of symptoms to the experience of personal growth and development of meaning in life despite having the disorder (Anthony, 1993; Davidson, Tondora, Lawless, O'Connell, & Rowe, 2009; Ralph & Corrigan, 2005).

The annual incidence of schizophrenia is 0.2–0.4 per 1,000, with lifetime prevalence (risk) of approximately 1% (Jablensky, 1997). Incidence of schizophrenia is the same across genders, although women tend to have a later age of onset than men (Murray & Van Os, 1998), and a more benign course of illness, including fewer hospitalizations and better social functioning (Angermeyer, Kuhn, & Goldstein, 1990). The later age of onset in women is associated with higher attainment of pre-illness social role functioning, which confers a better outcome (Häfner, 2000).

Significant variations in the prevalence and incidence of schizophrenia across different countries and cultural groups have been reported (U.S. Institute of Medicine, 2001). However, these differences are minimized when stricter diagnostic criteria for schizophrenia are used (Jablensky, 1997). Research by the World Health Organization across multiple countries indicates that the clinical syndrome of schizophrenia is similar across a wide range of cultures and countries, including developed and developing nations (Jablensky et al., 1992; World Health Organization, 1979).

Both genetic and environmental factors appear to play a role in the etiology of schizophrenia. Rates of schizophrenia are higher among relatives of those with schizophrenia than in the general population. Adoption and twin studies have shown that this increased risk is genetic, with a tenfold increase in risk associated with the presence of an affected first-degree family member. This genetic risk increases with each affected relative, to nearly 50% when both parents are affected (McGuffin, Owen, & Farmer, 1996), and 60–84% when a monozygotic twin is affected (Cardno et al., 1999). The genetic transmission does not appear

to follow simple Mendelian single-gene inheritance patterns. More likely, there are multiple susceptibility genes, each with small effect and acting in concert with epigenetic and environmental factors.

Environmental risks for schizophrenia include biological and psychosocial factors. Risk for development of schizophrenia is increased by pre/perinatal events including maternal influenza, rubella, malnutrition, diabetes mellitus, smoking during pregnancy, and obstetric complications (Susser & Lin, 1992; Takei et al., 1996; Thomas et al., 2001). Obstetric complications associated with hypoxia are particularly related to increased risk for development of schizophrenia, with risk perhaps mediated by excitotoxic effects of hypoxia on the fetal neonatal brain (Cannon, Jones, & Murray, 2002). It has been suggested that, because most cases of obstetric complications do not lead to schizophrenia, such complications interact with genetic vulnerability to increase risk of schizophrenia (Cannon et al., 2000). However, it is not yet known whether high frequency of obstetric complications in schizophrenia is the result of abnormal brain development associated with genetic vulnerability, or an additive environmental factor toward the development of schizophrenia.

Several sociodemographic factors are associated with increased risk of schizophrenia (van Os & Marcelis, 1998). Poverty and lower social class have long been linked to higher rates of schizophrenia (Bruce, Takeuchi, & Leaf, 1991). Individuals born in urban areas are more likely to develop schizophrenia than those in rural areas (Peen & Dekker, 1997). Although incidence of schizophrenia is similar across different racial/ethnic groups (Jablensky, 1999), increased rates are present in some ethnic minority populations, such as second generation Afro-Caribbeans in the UK (Boydell et al., 2001), Dutch Antillean and Surinamese immigrants in Holland (Selten, Slaets, & Kahn, 1997), and African-Americans (Rabkin, 1979). These differences may reflect the stressful effects of being an ethnic minority in a social environment, which may increase vulnerability to schizophrenia in biologically predisposed individuals, as hypothesized in the *stress-vulnerability model* (Nuechterlein & Dawson, 1984; Zubin & Spring, 1977) and discussed later in this chapter.

8.2   Recognition of Symptoms and Their Assessment

Schizophrenia is characterized by three broad types of symptoms: psychotic symptoms, negative symptoms, and cognitive impairment (Liddle, 1987). *Psychotic symptoms* involve loss of contact with reality, including false beliefs (*delusions*), perceptual experiences not shared by others (*hallucinations*), or bizarre behaviors. A variety of different types of hallucinations occur in schizophrenia, including auditory, visual, olfactory, gustatory, or tactile hallucinations, with auditory hallucinations most common. Common delusions in schizophrenia include persecutory delusions, delusions of control (e.g., the belief that others can interfere with one's thoughts), grandiose delusions (e.g., the belief that one is Jesus Christ), and somatic delusions (e.g., the belief that one's brain is rotting away). The presence and severity of psychotic symptoms tend to be episodic over time.

Negative symptoms are defined by the diminution or absence of basic emotional and behavioral processes. Common negative symptoms include *blunted affect* (e.g., immobile facial expression, monotonous voice tone), *anhedonia* (lack of pleasure), *avolition* or *apathy* (diminished ability to initiate and follow through on plans), and *alogia* (reduced quantity or content

of speech). Negative symptoms are more pervasive and fluctuate less over time than psychotic symptoms (Fenton & McGlashan, 1991), and are strongly associated with poor psychosocial functioning (Sayers, Curran, & Mueser, 1996). Because it is less readily apparent to others that negative symptoms are manifestations of a psychiatric illness, people are often perceived by relatives and others to be lazy and willfully unengaged in bettering their lives (Weisman, Nuechterlein, Goldstein, & Snyder, 1998).

Cognitive impairment in schizophrenia includes problems in *attention* and *concentration, psychomotor speed, learning and memory*, and *executive functions* (e.g., abstract thinking, problem-solving). A decline in cognitive abilities compared to premorbid functioning is present in most individuals with schizophrenia, with cognitive functioning after onset of the illness relatively stable over time (Heaton et al., 1994). Despite such decline, some clients' cognitive functioning is in the normal range. Similar to negative symptoms, cognitive impairment is strongly associated with functional impairment (McGurk & Mueser, 2004; Mueser, 2000).

Impaired role functioning and significant changes in personal behavior are also included as diagnostic criteria for schizophrenia. Problems in these areas include reduced ability to work, attend school, parent, have close relationships, take care of oneself, and enjoy one's leisure time, with difficulties often emerging several years before psychotic symptoms (Häfner, Löffler, Maurer, Hambrecht, & an der Heiden, 1999). Impairment in functioning can be profound, resulting in the need for disability entitlements and assistance in getting basic living needs met, such as housing, medical care, food, and clothing. Improving functioning remains the single most important challenge for the management of schizophrenia. Impairment in functioning tends to be relatively stable over time in schizophrenia, with some improvements over the long-term course of the disorder (Harding & Keller, 1998).

In addition to symptoms and impaired role functioning, schizophrenia affects many other areas of living. People are at increased risk for alcohol and drug problems (Kavanagh et al., 2004), infectious diseases (e.g., hepatitis C, HIV infection) (Rosenberg et al., 2001), violent victimization (Bebbington et al., 2004) and posttraumatic stress disorder (Mueser, Rosenberg, Goodman, & Trumbetta, 2002), housing instability and homelessness (Susser, Struening, & Conover, 1989), smoking-related and other illnesses (de Leon et al., 1995), and negative emotions, such as anxiety (Huppert & Smith, 2001), depression (Addington, Addington, & Patten, 1998), and hostility (Bartels, Drake, Wallach, & Freeman, 1991). The net result of exposure to these risks is a sharply increased rate of premature mortality (Miller, Paschall, & Svendsen, 2006), due mainly to diseases (Brown, 1997), but also including an increased risk of suicide, estimated to be about 5% (Inskip, Harris, & Barraclough, 1998).

The two major diagnostic systems for schizophrenia in common use are the *Tenth Revision of the International Classification of Diseases* (ICD-10) (World Health Organization, 1992) and the *Diagnostic and Statistical Manual, Fourth Edition* (DSM-IV) (American Psychiatric Association, 1994). Both systems objectively define symptoms and characteristic impairments of schizophrenia in a similar fashion, and have improved the reliability of diagnostic assessments over more subjectively based approaches. The major differences between systems are the DSM-IV requirements of social or occupational dysfunction (not included in ICD-10) and the 6-month duration of illness (versus 1 month for ICD-10), resulting in a somewhat narrower definition of the disorder in DSM-IV. Reliability of diagnoses between the two systems is high (Peralta & Cuesta, 2003). The stability of diagnosis over time is

moderate, with most variability immediately following onset of the disorder (Häfner & an der Heiden, 2003).

The gold standard for establishing the diagnosis of schizophrenia is the Structured Clinical Interview for DSM-IV (First, Spitzer, Gibbon, & Williams, 1996). A wide range of standardized instruments has been developed for the assessment of symptoms and psychosocial functioning in schizophrenia. The most reliable measures are semi-structured interviews that systematically probe for specific symptoms or areas of functioning. Commonly used measures for assessment of symptoms include the Brief Psychiatric Rating Scale (Lukoff, Nuechterlein, & Ventura, 1986), the Positive and Negative Syndrome Scale (Kay, Opler, & Fiszbein, 1987), the Scale for the Assessment of Negative Symptoms (Andreasen, 1984a), and the Scale for the Assessment of Positive Symptoms (Andreasen, 1984b). Reliable and valid measures of psychosocial functioning include the Social Adjustment Scale II (Schooler, Hogarty, & Weissman, 1979), the Social Functioning Scale (Birchwood, Smith, Cochrane, Wetton, & Copestake, 1990), the Social-Adaptive Functioning Evaluation (Harvey et al., 1997), the Life Skills Profile (Rosen, Hadzi-Pavlovic, & Parker, 1989), and the Quality of Life Scale (Heinrichs, Hanlon, & Carpenter, 1984). Overall psychiatric and psychosocial functioning are often summarized using the Global Assessment of Functioning scale (Niv, Cohen, Sullivan, & Young, 2007), which provides a behaviorally anchored rating ranging from 1 (low) to 100 (high).

8.3 Maintenance Factors of the Disorder

A wide range of different factors can contribute to the maintenance or exacerbation of symptoms of schizophrenia, and the functional impairments that characterize the disorder. The stress-vulnerability model provides a useful heuristic for understanding factors that can influence the course of the disorder, and identifying potential strategies for improving long-term outcomes (Liberman et al., 1986; Nuechterlein & Dawson, 1984; Zubin & Spring, 1977). According to this model, schizophrenia is caused by an underlying *psychobiological vulnerability*, determined early in life by a combination of genetic and early environmental (e.g., perinatal effects) influences. Once the psychobiological vulnerability is established, onset of the illness and its course, including relapses, is determined by the dynamic interplay of several biological and psychosocial factors. Among the biological factors that influence the course of schizophrenia, antipsychotic medication and substance abuse are the most critical. *Antipsychotic medications* can reduce psychobiological vulnerability, thereby decreasing symptom severity and sensitivity to relapses. *Substance abuse*, on the other hand, can increase psychobiological vulnerability, leading to worse symptoms and more relapses.

There are several psychosocial factors that also influence the severity and course of schizophrenia. *Stress* can impinge on psychobiological vulnerability, worsening symptoms and triggering relapses. Indeed, as previously described, environmental stress may also play a role in precipitating the onset of schizophrenia in some individuals who are psychobiologically vulnerable, but would not have otherwise developed the disorder. However, stress alone does not necessarily lead to symptom exacerbation. Rather, the effects of stress are influenced by two other psychosocial factors, including coping skills and social support.

Coping skills include the ability to handle challenging and potentially stressful circumstances (e.g., problem-solving and social skills) in order to either remove the stressor itself or to reduce its noxious effects. For example, social skills for handling conflict situations, problem-solving, and relaxation are different types of coping skills that can enable people with schizophrenia to handle the stresses of daily living without experiencing symptom relapses. *Social support* can also reduce the negative effects of stress on psychobiological vulnerability by facilitating more effective coping by the client, and independently removing stresses on the client.

In addition to the factors identified in the stress-vulnerability model that can maintain or exacerbate symptoms and functional impairments in schizophrenia, several other important factors should be noted that can influence the course of the disorder. One such factor is social stigma regarding mental illness in general, and schizophrenia in particular. People in the general public often endorse a wide range of inaccurate, stigmatizing beliefs about schizophrenia (e.g., people with the illness are often violent, are unable to work or parent, cannot take care of themselves, have multiple personalities), which can be fueled by distorted media accounts of people with mental illness (Wahl, 1995, 2003). These stigmatizing attitudes can lead to a loss of opportunities that promote adaptive functioning in the community (e.g., work, school, housing), as well as social exclusion that forms a barrier to rewarding relationships and leisure activities (Corrigan, 2005). Negative and inaccurate stereotypes about schizophrenia are not limited to the general public, but are also held by individuals with the illness themselves (i.e., self-stigma) and their family members (MacInnes & Lewis, 2008). The net result of this stigma can be demoralization, poor self-esteem, and lack of self-efficacy when people with the illness believe they in fact lack worth (Barham, 1984), and therefore do not invest the effort in changing their lives.

Another factor that can inadvertently maintain symptoms and disability in people with schizophrenia is social reinforcement of the "sick role" of the "mental patient" (Goffman, 1961). This role assumes that people with a mental illness are helpless victims of circumstances beyond their control, are not capable of functioning well, and must forever be reliant upon others for getting their needs met. Endorsement of such beliefs among mental health professionals, family members, and the general public naturally leads to a paternalistic attitude toward people with a mental illness in which their lives are managed by others, and their hopes and expectations are minimized in favor of accepting the status quo. These attitudes maintain clients' dependence upon others and prevent them from taking steps to gain greater control over their lives.

A final problem that can maintain disability, which is related to reinforcing the "sick role," is the outdated assumption that people with schizophrenia are incapable of playing an active role in their own treatment (Davidson, 2005). As a result of this assumption, clients are often not engaged and involved in their own treatment planning, they fail to follow through on treatment recommendations (Raskin, 1985; Weiden, Mott, & Curcio, 1995), and they may react to perceived coercion on the part of clinicians by doing the opposite (Moore, Sellwood, & Stirling, 2000). There is a growing recognition that people with schizophrenia are actively involved in coping with their illness (Breier & Strauss, 1983), and like individuals with chronic physical illness (Newman, Steed, & Mulligan, 2004), can collaborate with professionals in treatment planning, and can learn self-management strategies for minimizing illness-related impairments (Mueser et al., 2002).

8.4   Evidence-Based Treatment Approaches

With development, implementation, and empirical evaluation of several pharmacological and psychosocial interventions, the previously held notion that schizophrenia is an intractable, untreatable disease without hope of recovery has fortunately been debunked over the years. To date, there is a variety of evidence-based approaches that have demonstrated efficacy in aiding recovery from schizophrenia – providing psychotic symptom relief, enhanced community tenure, improved social and family functioning, employment skills, cognitive improvements, and reduced substance use. In this section, we provide a brief description of eight treatment approaches that have strong empirical support based on multiple randomized controlled trials. Interventions for schizophrenia tend to focus on specific domains of functioning, and therefore the selection of which treatments are necessary for a given client is made based on that individual's needs.

8.4.1   Pharmacological Treatment

Antipsychotic medications are a mainstay in the treatment of schizophrenia. Prior to discovery of antipsychotics in the 1950s, and their widespread use in subsequent years, the vast majority of people with schizophrenia spent most of their adult lives in institutions (Johnson, 1990). Antipsychotic medications played an important role in the deinstitutionalization of people with schizophrenia and other severe mental illness by providing a potent tool for reducing or eliminating some of the most disturbing and disruptive symptoms of the illness: hallucinations, delusions, and bizarre behavior. These medications are effective at both reducing severity of psychotic symptoms and preventing relapses of psychotic symptoms that frequently require acute inpatient treatment (Schatzberg, Cole, & DeBattista, 2007). For most people with schizophrenia, antipsychotic medications play an important role in treatment, and facilitate their ability to participate in other interventions aimed at further improving their functioning.

Although antipsychotics are effective at reducing psychotic symptoms, their impact on negative symptoms is negligible. Similarly, antipsychotics do not tend to have potent effects on reducing cognitive impairment that is characteristic of the illness. These are important limitations given the preponderance of evidence showing that psychosocial functioning in schizophrenia is more strongly correlated with negative symptoms (Pogue-Geile, 1989) and cognitive impairment (Green, Kern, Braff, & Mintz, 2000) than psychotic symptoms, and they underscore the role of psychiatric rehabilitation methods in improving functional outcomes. Finally, antipsychotic medications produce a range of problematic side effects, such as increased weight, increased vulnerability to diabetes, and sedation. Extensive research is underway and aimed at both developing more effective antipsychotics that have fewer and more benign side effects.

A wide range of other medications is also frequently used in the treatment of schizophrenia. The most commonly used adjunctive medications include mood stabilizers, antidepressant medications, and benzodiazepines. However, the evidence base supporting adjunctive medications for schizophrenia is slim (Arey & Marder, 2008). Many people with schizophrenia are prescribed multiple medications, including more than one medication in a class as well as different classes of medication, although there is limited empirical support for this form of "polypharmacy" (Stahl, 1999).

8.4.2 Supported Employment

Unemployment is particularly common in people with schizophrenia (Mueser, Salyers, & Mueser, 2001). However, most clients express an interest in work (Mueser et al., 2001; Rogers, Walsh, Masotta, & Danley, 1991), and evidence suggests that clients who return to work experience a modest reduction in symptoms and increased life satisfaction (Bell, Milstein, & Lysaker, 1993; Bond et al., 2001). Supported employment is designed to help clients get and keep competitive jobs paying competitive wages in the community, working alongside nondisabled individuals. Supported employment programs for persons with severe mental illness operate on a "zero-exclusion" criterion basis, with the stated desire to work as the only criterion for enrollment in a program. Clients are not excluded due to symptom severity, clinician-perceived "lack of readiness to work," or substance abuse problems.

The Individual Placement and Support model (IPS) (Becker & Drake, 1993, 2003) is the most widely studied model of supported employment program. The IPS model is based on several core principles, including: (1) integration of vocational and clinical services, (2) rapid search for jobs and no prevocational training, (3) attention to client preferences, (4) provision of ongoing, time-unlimited supports to facilitate job retention or transition to other jobs, and (5) counseling to inform clients about the impact of working on their disability income and insurance. Compared to other vocational programs, which often require extensive prevocational training, work readiness assessments, time-limited transitional jobs, or sheltered work supported employment focuses on helping clients obtain permanent *competitive* employment as soon as possible, with the job search usually beginning within a few weeks of the client enrolling in the program.

Significant research has accumulated on the effects of supported employment for severe mental illness over the past 15 years. Four studies have tested effectiveness of converting traditional day treatment programs into supported employment programs (Bailey, Ricketts, Becker, Xie, & Drake, 1998; Becker et al., 2001; Drake, Becker, Biesanz, Wyzik, & Torrey, 1996; Drake et al., 1994). Compared to sites that did not make the transition, the newly converted sites saw significant increases in the percentage of clients who were working competitive jobs. Furthermore, a total of 16 randomized controlled trials has demonstrated moderate to strong effects when comparing the impact of supported employment to other models of vocational rehabilitation on competitive employment outcomes (Bond, Drake, & Becker, 2008).

8.4.3 Assertive Community Treatment (ACT)

Assertive Community Treatment (ACT) is an intensive community-based, integrated treatment approach for individuals with schizophrenia who have difficulty staying connected to standard outpatient treatment modalities (e.g., attending psychopharmacology appointments, participating in therapy groups) and who are at high risk of relapse and psychiatric hospitalization. The ACT program, developed in the 1970s as a response to the host of problems related to the deinstitutionalization process that began in the 1960s, takes a multidisciplinary, holistic approach to treatment (Stein & Santos, 1998). Clients are provided medication management, housing assistance, help in getting basic daily living needs met, financial entitlements and money management support, counseling, and crisis management

by a team of multidisciplinary treatment providers. What is most unique about the ACT program compared to traditional case management is the intensity of treatment (with clinician/client ratios of 1:10 in ACT compared to 1:25 or more in traditional case management), the provision of most services in the community rather than at the clinic, and the sharing of caseloads across a multidisciplinary team of clinicians who assume round-the-clock coverage for clients.

ACT functions such that all team members are in frequent contact with every client and are in direct communication with each other regarding clients' needs on a very regular basis. Most ACT teams are comprised of a psychiatrist, nurse, social worker, at least one case manager and rehabilitation counselor, and ideally a substance abuse counselor as well. As a result of the team approach and reduced caseload, clinicians can provide a degree of continuity of care and individualized attention that most other services cannot. ACT services take place in the community, with staff members conducting frequent home visits, rather than insisting that clients come to the mental health clinic for appointments. A rule of thumb for client contact is that 80% or more of the appointments take place in the home or other community setting (Bond, Drake, Mueser, & Latimer, 2001). This allows for in vivo progress: clinicians can more effectively help clients solve everyday problems, like organizing their home or increasing medication adherence, in the natural environment than they can by simply talking about the problems in an office.

The ACT model has been widely tested, with over 30 randomized controlled trials evaluating its effectiveness (Bond et al., 2001). Research findings demonstrate that clients who participate in ACT programs have fewer psychiatric hospitalizations, reduced symptom severity, more stabilized community housing, and improved quality of life. However, in addition to successful levels of client engagement (1-year retention rates in mental health services were 84% for ACT clients compared to 54% for treatment-as-usual clients) (Bond, Clark, & Drake, 1995), evaluation of consumer satisfaction (although less thoroughly investigated) suggests that clients and their families were significantly more satisfied with ACT than with other types of services (Bond et al.).

8.4.4 Integrated Treatment for Dual Disorders

Substance use disorders are widely recognized as the most common comorbid conditions in individuals with severe mental illness, with rates of lifetime abuse about 50%, and between 20% and 40% with current abuse problems (Mueser, Bellack, & Blanchard, 1992). Substance abuse in individuals with schizophrenia contributes to a wide range of negative outcomes, including elevated suicide risk, exacerbation of psychotic symptoms and more frequent hospitalizations, homelessness, violence, and increased risk for contracting infections like HIV (Drake, Mercer-McFadden, Mueser, McHugo, & Bond, 1998). Due to their unfortunately unique set of intermingling "dual-diagnosis" symptoms, clients with schizophrenia tend to do poorly in both traditional mental health programs and substance use treatment services – exclusion, early discharge, and drop-out from such programs are common, as are poor outcomes (Ridgely, Goldman, & Willenbring, 1990). As a result, there have been substantial efforts to develop effective interventions for this population. These types of integrated treatments accept clients with varying levels of motivation to change their substance use behaviors and/or manage their mental illness, and, in keeping with the well-supported stages of change model (Prochaska & DiClemente, 1984), meet each client "where they are" on that continuum.

The hallmark feature of these interventions is that the same clinician provides both mental health and substance abuse treatment, and takes responsibility for working to seamlessly integrate interventions so that they are meaningful for the clients. This blending necessitates a consistent philosophy about, and approach toward, the two problems (Drake, Mueser, Brunette, & McHugo, 2004), and high-quality clinical skills to help clients effectively manage these entangled illnesses. Of paramount importance in integrated treatment is the need to tailor the specific interventions to the client's stage of recovery. The stages of change concept has been proposed as a way of understanding the different motivational states all (or most) people progress through when changing health-related behaviors (Prochaska & DiClemente, 1984): *precontemplation* (the person is not thinking about change), *contemplation* (the person is thinking about change), *preparation* (the person is making plans to change), *action* (the person is making changes), and *maintenance* (the person is maintaining change), and has since been adapted to better represent the discrete steps people with a dual disorder progress through when addressing their disorders in the context of treatment (Osher & Kofoed, 1989). For example, a client may acknowledge the deleterious effects of untreated psychiatric symptoms and will be interested in actively working on that problem, yet simultaneously be reluctant to talk about his use of marijuana or alcohol. In these cases, the clinician needs to address the specific problems the client wants to work on, while respectfully and nonjudgmentally exploring the client's substance use while providing basic information about the effects of substances on psychotic symptoms.

Multiple controlled trials have been conducted to evaluate the impact of integrated dual disorder treatment programs (Drake et al., 2004; Drake, O'Neal, & Wallach, 2008; Kavanagh & Mueser, 2007). These studies have evaluated the effects of individual psychotherapy, intensive outpatient rehabilitation, contingency management, group counseling, family intervention, care management, legal interventions, or residential treatment. Overall, research indicates that integrated treatments for dual disorders are effective and superior to nonintegrated treatments, with the most prominent achievement on the reduction of problematic substance use. In particular, contingency management-based programs and group counseling interventions enjoyed the strongest empirical support.

8.4.5 Cognitive-Behavioral Therapy (CBT) for Psychotic Symptoms

Despite substantial advances in the effectiveness of antipsychotic medications over the past few decades (see *Antipsychotic Medications* above), many individuals with schizophrenia continue to suffer from persistent psychotic symptoms. Nevertheless, the notion that CBT is contraindicated for psychotic clients prevailed for several years and was underscored by assumptions that they lacked reasoning skills or that their cognitive deficits were too severe to participate meaningfully in CBT. However, CBT has gained both rapid popularity and empirical support in the past 15 years, and is becoming a more commonly used adjunct to medication management.

CBT is structured, goal-oriented, and relatively short-term (ranging from approximately 4–24 sessions, often with additional booster sessions as needed). After a treatment engagement period, the establishment of the rationale for the Cognitive Model (the interrelationship between thoughts, emotions, and behaviors) and the development of a "problem list" with the client (e.g., "I'm afraid that terrorists are out to get me and I am not safe," "I may get kicked out of my apartment because I yell at the voices to get them to stop," "I don't have any friends"), therapy goals can be created and systematically addressed.

For individuals who experience significant functional impairments due to delusional beliefs and/or hallucinations, a major goal of CBT is the reduction of the impact of positive symptoms, accomplished through a variety of strategies including the development of alternative explanations for symptoms coupled with a "normalizing rationale" (Kingdon & Turkington, 1991). Also taught in CBT is the skill of evaluating evidence to support (and refute) unusual thoughts or beliefs about hallucinations in conjunction with subsequent cognitive restructuring and activities involving the gathering of additional evidence through "behavioral experiments." Depending on the client's problems and goals, later sessions can also focus on other areas, such as addressing negative symptoms, social skills training, relapse prevention, or medication adherence (Fowler, Garety, & Kuipers, 1995).

There are more randomized controlled trials for CBT than for any other individual psychotherapeutic intervention for psychosis (Martindale, Mueser, Kuipers, Sensky, & Green, 2003), and results from these studies suggest moderate to large effect sizes for psychotic symptom change at the end of treatment as well as overall maintenance of therapeutic gains at follow-up (Gould, Mueser, Bolton, Mays, & Goff, 2001; Zimmermann, Favrod, Trieu, & Pomini, 2005). Reduction of the severity of distress caused by hallucinations and delusions has certainly been the most robust finding for CBT. Most randomized controlled trials of CBT for psychosis have been conducted in the UK, and the intervention is more widely available and widely practiced there than in the USA. Nevertheless, modifications of traditional CBT for psychosis models have been implemented to account for limited financial resources and the particular structure of the US mental health system. For example, group CBT has begun to be evaluated as a feasible treatment modality with some promising results (Granholm et al., 2005). If CBT for psychosis is going to become more widely available in the USA, it will be crucial to develop standardized training programs for clinicians to ensure competent treatment. In the long run, it may be desirable to develop processes for certifying or credentialing clinicians in the provision of CBT to ensure high standards of care.

8.4.6 Family Psychoeducation

To address stress and burden in the family, and to reduce relapse rates, several types of family intervention have been developed and evaluated over the years for individuals with schizophrenia. The primary focus of these interventions is on teaching families about the nature of schizophrenia and its management in a respectful, collaborative manner that avoids blaming relatives (Glynn, 1993), and eschewing outdated theories that the family causes schizophrenia (Fromm-Reichman, 1948). The Schizophrenia Patient Outcomes Research Team (PORT; (Lehman & Steinwachs, 1998) has strongly recommended family psychoeducation programs for clients who have ongoing contact with their families, and has also highlighted that these interventions should not be limited to families where high levels of stress or interpersonal conflicts are present.

The nature, content, duration, and modality of psychosocial family interventions for schizophrenia vary from brief educational lectures (Smith & Birchwood, 1987) and psychoeducational groups (Leff et al., 1990) for relatives to more intensive single-family (Hogarty et al., 1991) and multifamily group therapy (McFarlane, Lukens, et al., 1995) interventions, lasting anywhere from 2 months to 2 years. The most effective programs provide education about symptoms of schizophrenia, strategies for more effective communication and solving problems, crisis

management approaches, and the provision of emotional support. Clients with schizophrenia are routinely included in most or all family sessions. Most purely educational models utilize easy to understand handouts and present information in a nonjudgmental manner, tailored to the particular issues of the individual family. In more intensive (and often longer duration) types of family interventions, such as behavioral family therapy or management (Falloon et al., 1988; Mueser & Glynn, 1999), communication and problem-solving skills are taught using the principles of social leaning, combined with the presentation of information about schizophrenia.

Overall, evidence for efficacy of family interventions for schizophrenia suggests that inclusion of relatives in psychosocial treatment reduces relapse and rehospitalization rates by at least 20% (Pitschel-Walz, Leucht, Bäuml, Kissling, & Engel, 2001). Other findings across different trials of family intervention demonstrate improvement in knowledge about schizophrenia (McGill, Falloon, Boyd, & Wood-Siverio, 1983), better treatment compliance (McFarlane, Link, Dushay, Marchal, & Crilly, 1995), reduced tension and improved family quality of life (Zastowny, Lehman, Cole, & Kane, 1992), and improved patient social and vocational adjustment (Bäuml, Kissling, & Pitschel-Walz, 1996). Duration of family psychoeducation appears to be important. Shorter-term psychoeducational programs demonstrate limited impact on the course and severity of the disorder (Pitschel-Walz et al., 2001), whereas interventions lasting greater than 6 months tend to reduce relapse and readmission over 2 years or longer (Dixon et al., 2001; Pitschel-Walz et al., 2001). Both single and multifamily group approaches are effective at reducing relapses and rehospitalizations (Baucom, Shoham, Mueser, Daiuto, & Stickle, 1998), with each modality having advantages and disadvantages. For example, it may be easier to engage families for clients with a first episode of psychosis in single-family treatment approaches (Montero et al., 2001), while multifamily interventions may provide more opportunities for social support and vicarious learning (Glynn, Cohen, Dixon, & Niv, 2006).

While the majority of family interventions has been created and implemented by professionals, the National Alliance for the Mentally Ill (NAMI) has developed trained peer family member-led groups that combine elements of education, skills training, and emotional support and are focused on increasing family well-being (Pickett-Schenk et al., 2006). Despite the strong empirical support of family psychoeducation, the PORT study found that only 31% of their sample of clients treated for schizophrenia reported that their family even received information about the illness (Lehman & Steinwachs, 1998), let alone formal family psychosocial treatment of any kind. In addition to limited access to services, many have noted that families decline participation in family interventions at a surprisingly high rate (Barrowclough et al., 1999; Leavey et al., 2004). New evidence suggests that active recruitment and strong initial engagement of the client and his/her family members play a crucial role in the acceptance and provision of family services (Murray-Swank, Dixon, & Stewart, 2007). Of great importance for the future of family-based psychoeducation for schizophrenia is improved dissemination to families of what the interventions actually involve, targeted at debunking long-held pejorative myths about family treatments for severe mental illness. This may improve interest in, acceptance of, and funding for, empirically supported family programs.

8.4.7   Illness Management and Recovery (IMR)

The notion that clients with schizophrenia are capable of learning how to better manage their illness has led to the development of a range of interventions designed to teach basic

self-management skills. One program, Illness Management and Recovery (IMR) (Gingerich & Mueser, 2005a), has recently been developed and was designed to explicitly incorporate specific empirically supported practices for illness self-management into a single cohesive program. Unlike some of the other interventions discussed in this chapter, which are geared toward specific subpopulations of clients with psychotic disorders (e.g., those who are at very high-risk for relapse or who have persistent distressing psychotic symptoms, or who struggle with substance abuse), IMR was designed to be appropriate for practically all individuals with severe mental illness and diagnoses of schizophrenia, schizoaffective disorder, major depression, or bipolar disorder. The basic rationale underlying the IMR program is that any person with a severe mental illness can learn how to better manage one's own mental illness in the service of setting and pursuing personally meaningful, functional goals.

The core components of the IMR program include five treatment strategies based on a review of the research that has direct relevance to improve management of severe mental illness. *Psychoeducation* is aimed at improving knowledge about mental illness, such as information about the stress-vulnerability model of schizophrenia, common symptoms, and facts about medication and other treatment strategies. *Medication-adherence strategies* include motivational interviewing (examining the role that antipsychotics may play in personal goal attainment), cognitive (evaluating the accuracy of beliefs about the use of medication), and/or behavioral (utilizing behavioral tailoring to incorporate medication into the daily routine) approaches designed to increase adherence to antipsychotics and reduce nonadherence-related relapses (Buchanan, 1992). *Relapse prevention* training involves helping clients identify specific triggers and early warning signs of relapses, and developing a plan to respond to those triggers (e.g., call case manager, arrange meeting with doctor to consider increase in medication dosage) in order to prevent relapses or minimize their severity. *Coping skills training* involves teaching clients skills for managing stress and dealing with persistent symptoms such as hallucinations, anxiety, or depression. Finally, the IMR program incorporates *social skills training* as a strategy for increasing social support, which has been shown to buffer the negative effects of stress and contribute to a better course of illness (Bebbington & Kuipers, 1992; Norman et al., 2005).

In a comprehensive review of illness self-management studies, Mueser et al. (2002) identified 40 randomized controlled trials evaluating either specific components of illness self-management or comprehensive programs. This review indicated that studies of purely psychoeducational methods significantly improve clients' knowledge about mental illness, but do not affect their medication adherence, reduce relapse, or improve functioning (Macpherson, Jerrom, & Hughes, 1996). Medication adherence programs focused more on cognitive-behavioral techniques like behavioral tailoring tend to greatly affect the degree to which clients take medication as prescribed (Cramer & Rosenheck, 1999). All of the programs addressing relapse prevention planning have demonstrated decreases in relapse or rehospitalization (Herz et al., 2000). Symptom severity reduced considerably in the studies where cognitive-behavioral-based techniques were utilized to increase clients' coping skills (Lecomte et al., 1999).

The feasibility and clinical promise of the standardized IMR program have been demonstrated (Mueser et al., 2006), as has the ability to implement the program with high fidelity across multiple community mental health centers (McHugo et al., 2007). In addition, two randomized controlled trials have indicated that the participation in IMR improves illness self-management, including outcomes such as symptom severity (Hasson-Ohayon, Roe, & Kravetz, 2007; Levitt et al., in press).

8.4.8 Cognitive Remediation

Cognitive impairment has long been recognized as a cardinal feature of schizophrenia that affects most people with the illness (Harvey, Green, Keefe, & Velligan, 2004; Heaton et al., 1994). Cognitive functioning is strongly related to psychosocial adjustment in areas such as work, social relationships, and capacity for independent living (Green et al., 2000; McGurk & Mueser, 2004), but is not affected by pharmacological treatment. For these reasons, cognitive functioning has been identified as a suitable target for psychosocial intervention (Nuechterlein, Robbins, & Einat, 2005).

Cognitive remediation strategies designed to improve cognitive functioning in schizophrenia were first adapted from approaches developed for traumatic brain injury (Benedict, 1989; Butler & Namerow, 1988). These methods often employ individual computer training exercises that target and practice specific cognitive skills (e.g., attention, psychomotor speed, memory), although some utilize paper-and-pencil tasks or training of attention during other learning activities, such as during social skills training (Silverstein et al., 2005). Training periods typically range from 3 to 6 months, although some programs extend up to 1 year or more (Hogarty et al., 2004). While an emphasis of cognitive remediation is on improving cognitive functioning, some programs also teach compensatory strategies for minimizing the effects of persistent cognitive difficulties (Krabbendam & Aleman, 2003; McGurk, Mueser, & Pascaris, 2005). Some programs also provide group practice exercises.

Several reviews of cognitive remediation have been published over the past decade (Krabbendam & Aleman, 2003; Kurtz, Moberg, Gur, & Gur, 2001; McGurk, Twamley, Sitzer, McHugo, & Mueser, 2007; Twamley, Jeste, & Bellack, 2003). The most recent review was a meta-analysis (McGurk et al., 2007), which found that cognitive remediation improved both cognitive and psychosocial functioning and had a modest impact on symptomatology. How-ever, of even greater importance is that the impact of cognitive remediation in these studies was moderated by the provision of adjunctive psychiatric rehabilitation; that is, studies which provided cognitive remediation in addition to a specific psychiatric rehabilitation program found significantly greater improvements in psychosocial functioning than studies that compared providing cognitive remediation alone to usual services. Thus, cognitive remediation is an effective approach to improving psychosocial outcomes, but only when it is combined with other rehabilitation methods.

8.4.9 Social Skills Training

Poor social skills has been recognized as a core characteristic of schizophrenia from its first conceptualization as a disorder (Kraepelin, 1919/1971). Among people with schizophrenia, better social skills are associated with female gender (Mueser, Bellack, Morrison, & Wade, 1990; Usall, Haro, Ochoa, Marquez, & Araya, 2002), better cognitive functioning (Addington & Addington, 2000; Mueser, Blanchard, & Bellack, 1995; Penn, Mueser, Spaulding, Hope, & Reed, 1995), lower levels of negative symptoms (Jackson et al., 1989; Patterson, Moscona, McKibbin, Davidson, & Jeste, 2001), and better social functioning (Bellack, Morrison, Wixted, & Mueser, 1990; Bellack, Sayers, Mueser, & Bennett, 1994). Specific social skills are related to, but distinguishable from, global social competence (Appelo et al., 1992).

Social skills training was developed as a systematic approach to teaching more effective interpersonal skills to people with schizophrenia. Typically, these programs involve the use of

cognitive-behavioral techniques grounded in learning theory (e.g., coaching. prompting, modeling, chaining, positive reinforcement) to improve specific components of social skills (Bellack, Mueser, Gingerich, & Agresta, 2004; Liberman, DeRisi, & Mueser, 1989). Sessions are most often provided in groups, although it can also be provided on an individual basis, over a time-limited period of time. Therapeutic goals can address a broad range of areas, such as improving assertiveness skills, emotion recognition, family communication patterns, or conversational skills.

The research on social skills training for schizophrenia has been frequently reviewed over the past 2 decades, with generally favorable conclusions (Benton & Schroeder, 1990; Corrigan, 1991; Dilk & Bond, 1996; Heinssen, Liberman, & Kopelowicz, 2000; Wallace, 1998; Wallace et al., 1980). In the most recent meta-analysis, social skills training was found to have a large impact on skills knowledge, moderate effects on social skill performance and psychosocial functioning, and a somewhat smaller effect on the severity of negative symptoms (Kurtz & Mueser, 2008). This review confirms the important role of social skills training at improving social functioning in schizophrenia. More recent efforts in this area have also begun to focus on improving social cognition (Penn et al., 2005), or the ability of clients to make accurate social judgments about other people's thoughts, feelings, and intentions, a skill in which many people with schizophrenia have significant impairments.

8.5 Mechanisms of Change Underlying Treatment

Schizophrenia is a complex illness that affects thought processes, mood, behavior, and a broad range of functioning. Given its complexity, it is no surprise that multiple treatments are usually required to reduced symptoms and improve psychosocial adjustment, with the specific combination of services tailored to the individual and his or her circumstances. The particular mechanisms underlying treatment-related change depend on the targeted area of change and the nature of the specific intervention. Targets of intervention can be broadly divided into two types, including reducing symptoms and preventing relapses, and improving psychosocial functioning. The stress-vulnerability model provides a framework for understanding the mechanisms underlying treatments aimed at reducing symptoms, whereas the mechanisms underlying psychiatric rehabilitation are thought to be responsible for improvements in interventions that target functioning.

According to the stress-vulnerability model, interactions among four different factors influence the course and severity of symptoms in schizophrenia. Thus, a change in any one of these factors can be expected to improve the symptomatic course of the illness, including reduced psychobiological vulnerability, reduced stress, increased coping skills, and increased social support, with more robust improvements occurring when multiple factors are changed. Some interventions target a single factor, whereas others target more than one factor. Two types of intervention are most critical for reducing psychobiological vulnerability: psychotropic medications (mainly antipsychotics) and substance abuse treatments aimed at reducing or eliminating drug and alcohol abuse.

A variety of strategies can be used to reduce effects of stress impinging on vulnerability and precipitating relapses. For example, tense and critical family relationships can create a stressful home environment that has been linked to increased vulnerability to relapses (Butzlaff & Hooley, 1998), whereas family psychoeducation was developed in order to educate families

about the nature of schizophrenia and its treatment, and to teach more effective and less stressful ways of solving problems and resolving conflicts (Mueser & Glynn, 1999). Another example is training in relapse prevention skills, which involves teaching clients how to identify and either reduce or more effectively manage stressful situations that have precipitated relapses in the past, as well as monitoring early warning signs of relapse and formulating a plan for responding to the emergence of those signs (Herz et al., 2000).

Many strategies have been developed that are aimed at increasing coping skills for managing stress. For example, stress management techniques (e.g., exercises involving breathing retraining, pleasant imagery, positive self-talk, muscular relaxation) can be taught to clients to reduce the negative effects of stress (Gingerich & Mueser, 2005a). Social skills and problem-solving training can be used to teach more effective skills for reducing interpersonal conflict (Bellack et al., 2004). Similarly, a variety of strategies can be used to increase social support. For example, family psychoeducation is aimed at both reducing stress in the family and at increasing social support for the client's involvement in treatment and progress toward personal goals. Social skills training is often used to help clients develop more rewarding and supportive social relationships.

Psychiatric rehabilitation methods can be conceptualized as improving psychosocial functioning through two different mechanisms: improved competence and enhanced environmental supports for adaptive behavior (Corrigan, Mueser, Bond, Drake, & Solomon, 2008). Some interventions work through both mechanisms, whereas others operate primarily by changing just one. For example, social skills training is used to teach a wide range of skills to facilitate better social relationships, improved self-care and independent living skills, greater involvement in leisure activities, and better performance at work, school, or parenting (Liberman, 2007). Supported employment, on the other hand, involves providing environmental supports aimed at helping clients who want to work to find and keep competitive jobs in the community (Becker & Drake, 2003).

A final mechanism underlying changes in both symptoms and functioning is the individual's personal sense of agency, self-efficacy, and self-esteem. Most interventions for schizophrenia require some engagement and involvement of the client by treatment providers, and thus developing a working alliance is of primary importance (Priebe & Gruyters, 1993). A therapeutic relationship between the client and clinician requires active collaboration between the two individuals, and instilling hope and belief in the client that change is both possible and within his or her capability. This can be most effectively achieved by respecting the client's autonomy and right to make personal decisions, minimizing the use of coercive interventions, and promoting shared decision-making between the client and treatment providers (Deegan & Drake, 2006; Fenton, 2003).

8.6   Basic Competencies of the Clinician

When working with people with schizophrenia, there are some important basic skills, or competencies, that clinicians must develop in order to provide practical and effective treatment. Due to the often debilitating nature of this disorder and its resulting functional impairment, clinicians need these basic competencies to succeed in the provision of a recovery-based set of interventions. These skills are outlined below.

8.6.1 Knowledge About Schizophrenia, Empirically Supported Treatments, and Entitlements, and How to Access such Services

Not only is it important for clinicians to be knowledgeable about manifestation of symptoms of this disorder, but they should also be well-versed in the stress-vulnerability model of onset and relapse of schizophrenia. Basic command of the literature on rates of detrimental substance use (20–40%) consequences of co-occurring disorders (e.g., psychotic symptom exacerbation, increased violence), and risk factors for suicidal behavior in people with schizophrenia (e.g., substance use, illness insight) is crucial when treating these clients. Clinicians should also be aware of which treatments work for people with serious mental illness (e.g., cognitive-behavioral therapy for psychotic symptoms, integrated treatment for co-occurring disorders, supported employment, etc.) and which interventions do not confer notable benefit (e.g., psychodynamic therapy).

Case-management skills are particularly crucial when working with individuals with schizophrenia, perhaps more so than with other psychiatric disorders. Clinicians need to have an understanding of available social service entitlements and services for their clients, such as Social Security benefits, supported housing, and subsidies for reduced transportation fees, as well as how to help clients access them.

8.6.2 Ability to Effectively Assess Psychopathology, Functioning, and Strengths/Supports

When conducting initial and ongoing assessments with clients with schizophrenia, the clinician must be knowledgeable about particular areas into which to probe. It is crucial to ask a client about depression and anxiety, suicidal ideation, substance abuse, as these are frequently co-occurring problems in this population. Trauma history and posttraumatic stress symptoms, while often undetected and untreated in those with schizophrenia, occur at alarmingly high rates (43–98% have reported at least one lifetime traumatic event) (Mueser et al., 1998), and account for a great deal of additional morbidity, such as more severe psychotic symptoms and higher service utilization (Read & Argyle, 1999).

Practitioners working with those with psychosis need to know not only the importance of gathering information, but also how to effectively gather that information. For example, interviewing a client about existence of delusions or paranoid ideation can be a delicate matter – one's goal is to learn about the client's beliefs while neither colluding in the delusion nor dismissing it as false. Other unique clinical skills particular to working with this population include managing clients' paranoia toward the assessor and/or treatment team, distilling the content of thought-disordered speech, and gathering important data despite the barrier of negative symptoms that may affect the interview.

Throughout treatment, clinicians need to effectively monitor client progress and outcomes. Knowing the risk factors in this population (as described above), practitioners should have a consistent system of monitoring changes in these areas, utilizing both standardized measures (such as the Beck Depression Inventory, BDI; Beck, Steer, & Brown, 1996) and frequent "check-in." Progress toward clients' functional goals should also be assessed regularly and discussed with frequency.

8.6.3   Ability to Develop a Strong Working Alliance with People Who Have Schizophrenia

Bordin (1976) described the necessity for developing a strong client–therapist agreement on treatment tasks and treatment goals, as well as fostering a strong therapeutic bond. While this triad has been demonstrated to be important in the therapeutic relationship regardless of particular psychiatric condition, it becomes particularly critical when working with individuals with schizophrenia.

Often overlooked when treating individuals with serious mental illness is the client's perspective on his or her own treatment goals. Perhaps because a client may have pervasive psychotic symptoms or pronounced negative symptoms, the treatment team and family members may not take the necessary time to distill the client's opinion, and the end result is a set of goals on which others think the client "should" work. For instance, relatives and the treatment team may push the client to work on socializing. Upon further discussion, however, the clinician determines that the client is satisfied with his degree of social connectedness, but what he really wants is to find employment.

This collaborative goal-setting approach is crucial, and without it, treatment will likely not move forward. In addition, clinicians should make sure that they are consistently practicing reflective listening about topics important to the client (even if the content is difficult to understand or delusional), "meeting the client where he or she is at" (e.g., not pushing smoking cessation if the client does not yet have healthy, meaningful activities to replace smoking), addressing clients' immediate concerns and needs (such as housing problems, or sadness about the death of a friend), and of course, having and conveying a sense of respect for the client and his or her difficulties and goals.

8.6.4   Ability to Adopt a Recovery-Focused, Strengths-Based Philosophy Toward Treatment

Traditionally, goal-setting in the treatment of schizophrenia has been focused on the reduction or elimination of "deficits," such as psychotic symptoms, inappropriate behavior, or social withdrawal. This overemphasis on deficits in individuals who have already experienced significant setbacks in their lives can worsen self-esteem and contribute to further demoralization. Taking a strengths-based and resiliency-focused approach to treatment planning helps individuals and family members become more aware of, and feel good about, their personal positive attributes, how they have previously used these abilities to cope with life challenges and achieve goals, and how these attributes can be further utilized to achieve individual and shared goals. Thus, focusing on strengths and resiliency not only makes people feel better about themselves and their efforts, but also identifies tools that can be used to achieve goals.

This approach is reflected in the growing popularity of strengths-based case management (Rapp & Goscha, 2006) and highlights the following principles: (1) people with schizophrenia can recover, reclaim, and transform their lives; (2) the focus is on individual strengths rather than pathology exclusively; (3) the community is viewed as an oasis of resources; (4) the client is the director of the helping process; (5) a primary setting for the work is in the community; and (6) the clinician–client relationship is primary and essential.

Not only is it the clinicians' responsibility to know the newest literature on recovery from schizophrenia and take this strengths-based approach to their work with those with

schizophrenia (Davidson et al., 2009), but it is also important that they are able to convey the hope inherent in the recovery vision to clients themselves, their concerned family members, and, as needed, other members of a client's treatment team who may not have yet adopted this philosophy themselves (Deegan, 1996, September).

8.6.5   Ability to Take a Person-Centered Planning/Shared-Decision-Making Approach to Treatment

A shared decision-making approach is predicated on the assumption that all clients (and family members) need critical information to make informed decisions, but that ultimately it is the client's decision that determines the chosen treatment (Deegan & Drake, 2006). In the medical field, shared decision-making is defined as a collaborative *process* between a client and clinician to share information, perspectives, and responsibility for decisions, when there is no clearly optimal treatment (as is unfortunately often the case with schizophrenia) (Charles, Gafni, & Whelan, 1999). The process is systematic, based on providing information about the likely or possible outcomes related to the decision in question (including outcomes of the various treatment alternatives), clarifying the client's values and goals, and exploring their social support network. The client and clinician are partners, each contributing his or her own specialized knowledge and experience to making the decision, in contrast to traditional hierarchical decision-making in which clients are expected to passively follow the "doctor's orders."

Effective shared decision-making dictates that the clinician be able to: (1) provide evidence-based information (and clinical experience with this condition) regarding possible treatment options and their effects; (2) elicit client perspectives, values, and individual goals; and, (3) use clinical skill in reaching a decision/treatment plan that is mutually agreeable and reasonable to both parties (Towle & Godolphin, 1999).

This approach can improve the ability of clients, for example, to use antipsychotic medication effectively by involving them in the decision to take medication, which demonstrates respect for the client and appreciates the individuality of the recovery process, and highlights the notion that there are multiple pathways to recovery. Involving and respecting the ability and right of the clients to make their own treatment decisions help in recognizing the reality of where the choice lies, and avoid jeopardizing the therapeutic relationship by either ignoring the clients' desires or using coercion (as described in the section "Ability to Develop a Strong Working Alliance with People Who Have Schizophrenia" above).

8.6.6   Ability to Work Effectively with Natural Supports (such as Family Members) of the Person with Schizophrenia

Natural supports are nonmental health professionals who by virtue of their relationship and regular contact with the client may be in a position to help that person manage his or her psychiatric illness or make progress toward personal goals (Rapp & Goscha, 2006), such as family members, friends, employers, self-help group members, and other members of a community organization. In the absence of collaboration with these individuals, some natural supports may inadvertently undermine the client's treatment (e.g., discouraging medication adherence because they do not understand its role in treatment; encouraging alcohol

consumption at parties) or progress toward goals (e.g., discouraging returning to school or work because of fear that stress will provoke a relapse). Further, because of their contact with clients in everyday settings, natural supports are often in an ideal position to support illness self-management behaviors and steps toward goals. In addition, since many people with schizophrenia have cognitive impairments that can interfere with practicing skills related to illness self-management, job performance, or social/self-care skills in the natural environment, engaging and collaborating with natural supports can facilitate the acquisition of new skills (Tauber, Wallace, & Lecomte, 2000). Finally, work with natural supports also aims to help individuals repair relationships with family members or friends that may have been damaged during or after an episode of psychosis, in order to delay or prevent a potential loss of supportive relationships.

Given the importance of natural supports, it is crucial for clinicians to be aware of and understand these potential benefits. Moreover, clinicians need to develop the clinical skills necessary to effectively engage family members and other supports (Murray-Swank et al., 2007). This engagement generally includes (but is not limited to): (1) the provision of a clear and accurate description of the symptoms, course, treatment, and prognosis of schizophrenia and the community resources to access; (2) the ability to answer questions about the disorder and instill a recovery-based philosophy; (3) involvement of the natural supports in treatment planning as appropriate; and (4) the conveyance of an empathy and respect for the natural support persons and their important role in the client's life. When engaging natural supports (especially family members) in the client's treatment, it is critical for the clinician to do so while maintaining appropriate therapeutic boundaries with these individuals, as well as upholding appropriate client–family member boundaries by respecting the client's right to confidentiality and autonomy.

8.6.7   Motivational Enhancement Skills

Motivational enhancement strategies are widely used in psychiatric rehabilitation approaches aimed at improving illness self-management skills (Gingerich & Mueser, 2005a), substance abuse (Bellack, Bennet, & Gearon, 2007; Mueser, Noordsy, Drake, & Fox, 2003), and goal-setting and treatment planning (Corrigan, McCracken, & Holmes, 2001), and thus they have broad applicability throughout work with this population. Problems sustaining motivation to follow through on desired plans and goals, for example, are one of the defining negative symptoms of schizophrenia ("avolition").

While a wide range of strategies falls under the rubric of motivational enhancement (see section "Expert Competencies" below for a more detailed description of motivational interviewing interventions), clinicians working with individuals with schizophrenia should be competent in engaging the client in a variety of motivational enhancement-based exercises in the service of progress toward treatment goal attainment. These basic skills include first understanding and "meeting the client where he or she is at" in regard to behavioral change, and helping the client weigh the "pros" and "cons" of a contemplated change in behavior (e.g., taking medication, using drugs and alcohol). Clinicians should make concerted effort to help clients break down large goals into smaller and more manageable steps (e.g., saying "hello" to other clients at mental health clinic, then joining a new group, then inviting someone to go out for coffee as small steps toward a larger goal of "expanding social network"). Clinicians also need

to have skills to effectively explore with clients how behavior change can facilitate progress toward goals and to aid clients in reframing past challenges and setbacks as opportunities to identify personal strengths and survival skills (Mueser et al., 2003).

8.6.8   Understanding and Skill at Using Basic Cognitive-Behavioral Therapy Skills with Clients with Schizophrenia

A broad range of cognitive-behavioral therapy (CBT) approaches has been developed over the past several decades for a variety of psychiatric conditions. Basic efficacious CBT approaches with relevance to persons with psychosis include social skills training (e.g., conversational skills, job interviewing, substance refusal), training in relaxation skills to manage anxiety and paranoia, coping strategies for managing persistent symptoms (e.g., hallucinations, negative symptoms), problem-solving and self-monitoring (e.g., to modify smoking, eating, or substance use behaviors), and behavioral tailoring to incorporate medication into one's routine and increase medication adherence (Gingerich & Mueser, 2005a).

In addition to competence in CBT skills for this population, clinicians need to adopt and effectively convey the "spirit of CBT" which emphasizes a highly collaborative client–therapist relationship; the interrelationship among feelings, thoughts, and behavior; the value of weekly out-of-session homework skills practice to increase skill generalization; and the importance of reinforcement in shaping client motivation and progress toward goals. (See "Expert Competencies" section below for a description of more advanced CBT techniques.)

8.6.9   Skills for Providing Psychoeducation to Clients

Psychoeducation is providing information about psychiatric disorders and their treatment to clients and family members using a variety of teaching strategies designed to maximize comprehension and relevance of the material to their lives (Anderson, Reiss, & Hogarty, 1986; Ascher-Svanum & Krause, 1991). Common psychoeducational teaching strategies include presenting information didactically, using information handouts, asking questions to check understanding, eliciting examples and experiences of individuals related to the material, adopting the language of the person(s) to facilitate understanding, and avoiding conflict by seeking common ground when there are disagreements on topics such as diagnosis, symptoms, treatment experiences, or the explanatory model for understanding psychosis.

Psychoeducation is critical in the treatment of schizophrenia, particularly soon after the development of the illness, because clients and families often know little about the disorder or its treatment. Clients and their relatives need to understand the principles of treatment and the various treatment and rehabilitation options available in order to participate in the informed, shared decision-making that is the backbone of effective treatment of schizophrenia. Abundant evidence shows that people with psychiatric disorders can learn and retain such information (Lincoln, Wilhelma, & Nestoriuca, 2007; Mueser et al., 2002). Clinicians need to ensure that psychoeducational skills training addresses skills of specific interest to the client, and that it is culturally sensitive to the individual's ethnic and cultural background (Corrigan & Holmes, 1994; Lefley, 1987).

8.6.10 Ability to Collaborate Effectively with an Interdisciplinary Treatment Team

Treatment of schizophrenia does not occur in a vacuum, and in the most common outpatient community mental health clinic treatment model, several people from varying disciplines are involved. A typical treatment team may consist of any combination of the following professionals: psychiatrist, case manager, nurse, group home staff, supported employment staff, individual therapist, and group therapist. In addition, as described above, natural supports often play a prominent role in the treatment of those with this disorder.

The variety of disciplines represented in the composition of these treatment teams naturally indicates that the members typically differ in their educational backgrounds, training models, and treatment foci. As a result, clinicians working on these teams must develop skills to communicate effectively with the treatment team, and despite any differences in these areas, be able to maintain a professional and workable relationship for the benefit of the client.

Good interpersonal and assertiveness skills are not only crucial for the clinician in this situation, but also for the client. Clinicians should work with their clients with schizophrenia and help them learn these same skills so that they can improve communications with their other treatment providers (e.g., making an appropriate request to a psychiatrist for a medication adjustment). This can be achieved through modeling and step-by-step social skills training involving role-plays, corrective feedback, and in vivo practice in the client's immediate environment.

8.6.11 Ability to Access Expert Consultation

As with any clinical practice with any population, it is critical for clinicians to know when to seek supervision and consultation from other professionals. While work with individuals with schizophrenia can be incredibly rewarding, it can also be very challenging. Many aspects of the disorder – ranging from hallucinations and delusions to thought disorder and communication deficits, cognitive impairment, negative symptoms, co-occurring substance use, concomitant depression and suicidality, and functional impairment – can be complex to assess and treat. Therefore, clinicians must commit to consistently seeking out new research on effective treatments, attending workshops and trainings on empirically supported interventions for serious mental illness, and keeping close contact with the treatment team and the client's natural supports in order to monitor progress toward goals.

8.7   Expert Competencies of the Clinician

While the aforementioned basic competencies are skills that all clinicians who work with people with schizophrenia should have, it is helpful to have expertise in a few key areas in order to really enhance positive client outcomes. However, as the technology of psychiatric rehabilitation has blossomed in recent years (Corrigan et al., 2008), it is no longer feasible for any one clinician to have expertise in every area or competency. Furthermore, as the most typical setting for schizophrenia treatment is the multidisciplinary treatment team approach, it is possible that among all the members of the team, these expert competencies will be well represented.

Many of the expert competencies that are described below are skills that cut across the variety of the evidence-based treatments currently available for schizophrenia.

8.7.1 Ability to Deliver Group Interventions

Group psychotherapy is a cost-effective treatment model at most inpatient units, partial hospital programs, and outpatient community mental health clinics, and, therefore, is often the intervention mode of choice at these treatment centers. In schizophrenia treatment, the group model serves to create a social network for an often marginalized group of people and also allows for in vivo practice of targeted interpersonal skills.

In addition to developing proficiency in particular evidence-based group interventions for schizophrenia, such as social skills training, teaching illness self-management, and CBT for psychosis, clinicians should develop the ability to deliver these manualized treatments with skillful flexibility. This entails striking a balance between adhering to the manual content and individualizing the specifics of the intervention to meet the needs of the group members. For example, in a group where over half of the participants have reported high levels of distress related to hearing voices, skilled clinicians will spend extra time on the "coping with auditory hallucinations" module within a CBT curriculum.

Group work in schizophrenia also offers some unique challenges. Due to attention deficits, social impairment, and negative symptoms, it is critical for clinicians to develop useful strategies for engaging and motivating participation and interclient interaction in group sessions. Paranoia and delusional ideation about the group leader, other group members, and even the treatment manual content must be met with gentle reassurance on the clinician's part, coupled with the skillful use of cognitive-behavioral evidence testing to challenge these maladaptive, distressing beliefs.

8.7.2 Ability to Provide Empirically Supported Family Psychoeducation

Every clinician who does work in schizophrenia must be able to effectively communicate with and educate family members about this disorder and its treatment (see section on "Ability to Work Effectively with Natural Supports (such as Family Members) of the Person with Schizophrenia" above). However, many families require more attention and a deeper level of skill-building to improve relationships and client outcomes. In many families, the stress and strain of emotionally and financially supporting a relative with a serious mental illness, coupled with the client's own sense of demoralization and self-inefficacy can create a difficult family environment (Hatfield & Lefley, 1987).

Clinicians who develop proficiency in evidence-based family interventions, such as multifamily group therapy (see "Evidence-Based Treatment Approaches" section above), can substantially influence the family climate and in turn, significantly impact client outcomes. For example, in behavioral family therapy (Falloon, Boyd, & McGill, 1984; Mueser & Glynn, 1999), clinicians help clients and their relatives identify and work toward both individual goals (e.g., client wants to reduce substance use, mother wants to take better care of her physical health, and father wants to manage work stress more effectively) and family-based goals (e.g., the family wants to increase frequency of pleasant activities done together and decrease shouting during

disagreements). Then, information is provided to the family about the nature of schizophrenia and its treatment, followed by training in communication skills and teaching a structured approach to collaboratively solving problems. These skills are taught in the context of helping the family work together toward achieving these goals.

8.7.3　Ability to Provide Effective Longer-Term Intervention for Co-occurring Disorders and Ability to Provide Effective Motivational Interviewing Interventions

Given the high prevalence of co-occurring substance use disorders in this population and the resultant morbidity this creates, we have outlined some basic skills that all clinicians should have in order to approach this common problem (see section on "Motivational Enhancement Skills" above). Developing expertise in the treatment of co-occurring disorders is a much needed and much valued skill. In addition to the basic skills described above in the "Motivational Enhancement Skills" section (providing psychoeducation, "meeting the client where he or she is," discussing pros and cons of use), clinicians can provide clients with a longer-term and more detailed intervention replete with a variety of skills to create more enduring changes in substance use behaviors. An expert level of intervention would include clinician training in, and implementation of, the following: a clear understanding and appropriate work within a client's current "stage of change," the teaching and practice of substance refusal skills, the development of the discrepancy between client goals and behavior, review and discussion of the decisional balance for and against substance use versus abstinence, exploration about and skills-based preparation for high-risk situations, and provision of detailed relapse prevention planning (Mueser et al., 2003).

Related to the provision of useful co-occurring disorders interventions is the use of motivational interviewing to illicit changes in other behaviors (in addition to problematic substance use), such as weight loss, medication nonadherence, and smoking cessation. While under the umbrella of a motivational enhancement style (see section on "Motivational Enhancement Skills"), expertise in motivational interviewing "proper" entails use of a more comprehensive set of techniques which includes expressing empathy for the client's predicament, developing the discrepancy between current behavior and personal goals, "rolling with resistance" from the client, support of client self-efficacy, and instillation of hope that positive and lasting change is possible.

8.7.4　Skilled Provision of CBT for Psychosis and Other Difficulties Related to Schizophrenia

As mentioned above, it is important for clinicians working with people with psychosis to understand and utilize a broad range of CBT approaches as well as convey the CBT "spirit." Clinicians who master these more basic skills (social skills training, relaxation skills training, coping skills development, problem-solving, etc.), may go on to develop expertise in this intervention by gaining training and experience in the more "cognitive" aspects of this treatment.

The current cognitive model of psychosis suggests that inaccurate, maladaptive, and unhelpful beliefs are at the heart of a variety of symptoms that afflict those with schizophrenia,

including delusions, negative symptoms, and the distress caused by hallucinations (Beck, Rector, Stolar, & Grant, 2009). In this population, these types of beliefs may also be responsible for the maintenance of depressive symptoms, anxiety, trauma-related symptoms (PTSD), and self-stigma. In order to help clients with these problems, clinicians must first learn and be able to teach to clients the cognitive model of psychotic symptoms. They must gain proficiency in understanding and then conveying the skill of cognitive restructuring, as well as learn to detect, elicit, and help modify maladaptive core beliefs. Development of this expertise can provide tremendous service to clients with schizophrenia, reduce their distress, and increase goal attainment.

8.7.5 Ability to Provide Supported Employment to Clients with Schizophrenia Who Want to Work

Supported employment research has demonstrated that individuals with serious mental illness are able to successfully obtain and maintain work in competitive jobs (Bond, 2004). Clinicians working with people with schizophrenia must adopt this belief and convey this to their clients, their clients' families, and other treatment providers as needed. Basic clinician competency around client employment involves providing support for client work, discussing work history, aiding in the identification of potential job leads, and problem-solving around obstacles to obtaining work. For those clients who already have jobs, clinicians should be adept at helping clients troubleshoot and problem-solve difficulties that may develop at work. Collaboration with the psychiatrist may be necessary to help simplify client medication regimens to help clients keep up with medicine while on the job.

Many of these aforementioned interventions can be provided in the clinic. However, clients often need more in vivo support in order to get and keep jobs employment and be able to successfully maintain their jobs. In these cases, clinicians with expertise in supported employment (Becker & Drake, 2003) can help their clients by providing a more hands-on "fieldwork" experience. Supported employment clinicians provide in-person job development via holding frequent meetings with the clients' employers, as well as providing follow-along support and coaching throughout the employment experience. Clinicians with expertise in this area can significantly aid job retention and therefore the enhancement of the client's quality of life.

8.7.6 Expertise in Cognitive Remediation Interventions

Clinicians who work with people with schizophrenia must have an understanding of the nature and consequences of cognitive impairment that many with this disorder possess. Basic competency in recognizing common deficits (e.g., attention, concentration, abstraction, etc.) and how those deficits impact the work with the clinician and the daily life of the client is crucial. Clinicians must also develop skills to help clients learn strategies to compensate for, or even minimize, these deficits (such as teaching about list making, daily routines, rehearsal, over-learning, and attention-shaping) (McGurk & Mueser, 2006).

As described in the "Evidence-Based Treatment" section above, cognitive remediation is composed of a specific set of interventions designed to train clients to improve their

neurocognition in key areas such as attention and mental flexibility, in the hopes that these improved skills will generalize to improvements in daily living. Research supports the benefits of cognitive remediation, but only when it is provided in combination with other psychosocial rehabilitation approaches, such as social skills training or vocational rehabilitation (McGurk et al., 2007). Cognitive remediation needs to be implemented and evaluated by trained staff using computerized technology that has been shown to improve cognitive functioning in schizophrenia. Furthermore, it needs to be provided in the context of a focused effort on improving a specific area of psychosocial functioning, in a coordinated fashion with other rehabilitation methods. Development of expertise in cognitive remediation involves specific training and access to training technology which can provide substantial benefits to clients in terms of day-to-day skills mastery, success in employment, and general quality of life.

8.8 Transition from Basic Competence to Expert Competence

Perhaps due to the complex nature of schizophrenia, and the many potential areas of impairment caused by this disorder (social, cognitive, vocational, etc.), numerous forms of rehabilitation have been developed and tested in recent years. As a result, a great deal is known about effective psychosocial rehabilitative treatment of this disorder, which makes for a hopeful and exciting time in the field of intervention for serious mental illness. As previously mentioned, there are too many evidence-based practices in the treatment of schizophrenia for any clinician to become a master of every one (i.e., social skills training, CBT for psychosis, family psychoeducation, integrated treatment for dual disorders, cognitive remediation, illness management and recovery). Rather, most professionals tend to develop expertise in a few specific areas.

There is no consensus about what constitutes an "expert" in these treatment areas. Compared to the treatment of other psychiatric disorders (such as depression and anxiety), specific programs to certify clinicians' mastery of particular interventions for schizophrenia have not been established in the USA. As yet, the term "expert" has not been defined. Furthermore, for many years the psychosocial rehabilitation of schizophrenia was not viewed as possible in clinical psychology (Mueser & Noordsy, 2005), and even now many graduate training programs still do not offer courses and training opportunities in these interventions. Only now are some universities starting to integrate coursework and training in empirically supported treatments for serious mental illness into their curricula, and still, on a very limited basis (Spaulding et al., in press).

Nevertheless, there are several ways to pursue meaningful training in these specific interventions and move toward expertise. These strategies are outlined below.

8.8.1 Learn the Literature

Do a comprehensive literature search on the intervention of interest, and work toward staying abreast of new articles and findings on the subject. There are several good books written on most of these interventions, some of which are theoretical in nature and provide an excellent background overview of the treatment (see Table 8.1).

🔹 **Table 8.1**

Resources for training in psychosocial interventions for schizophrenia

Books and Treatment Manuals
Supported Employment Becker & Drake (2003) Swanson, Becker, Drake, & Merrens (2008)
Assertive Community Treatment (ACT) Allness & Knoedler (1998) Stein & Santos (1998)
Integrated Treatment for Dual Disorders Bellack et al. (2007) Mueser et al. (2003)
Cognitive Behavioral Therapy (CBT) for Psychosis Beck et al. (2009) Kingdon & Turkington (2004) Morrison, Renton, Dunn, Williams, & Bentall (2004) Wright, Turkington, Kingdon, & Basco (2009)
Family Psychoeducation Anderson et al. (1986) Barrowclough & Tarrier (1992) McFarlane (2002) Mueser & Glynn (1999)
Illness Management and Recovery (IMR) Gingerich & Mueser (2004) Gingerich & Mueser (2005b)
Cognitive Remediation Brenner, Roder, Hodel, Kienzle, Reed, & Liberman (1994) Wykes & Reeder (2005)
Social Skills Training Bellack et al. (2004) Liberman et al. (1989)
General Psychiatric Rehabilitation Anthony, Cohen, Farkas, & Gagne (2002) Corrigan et al. (2008) King, Lloyd, & Meehan (2007) Liberman (2008) Pratt, Gill, Barrett, & Roberts (2007)

8.8.2   Read Relevant Treatment Manuals and Books

There are now some published treatment manuals for different interventions which walk clinicians through the treatment in a step-by-step fashion, providing detailed descriptions of each session, means to troubleshoot obstacles that may arise with clients, and reproducible handouts and worksheets (see ❯ Table 8.1).

■ **Table 8.2**

Conferences, meetings and professional organizations with special interest in psychosocial interventions for schizophrenia

• American Psychological Association (APA) www.apa.org
• Association for Behavioral and Cognitive Therapies (ABCT) www.abct.org
• Schizophrenia and Other Serious Mental Disorders Special Interest Group (Affiliated with ABCT) www.schizophreniasig.com
• International Association for Cognitive Psychotherapy (IACP) www.the-iacp.com
• US Psychiatric Rehabilitation Association (USPRA) www.uspra.org

8.8.3 Attend Specialty Conferences and Meetings

An excellent way to deepen understanding about the theory behind and the application of a particular intervention for schizophrenia is to attend a conference that hosts many researchers and practitioners in the field. For instance, the Association for Behavioral and Cognitive Therapies and the US Psychiatric Rehabilitation Association both hold annual meetings that are generally well represented by professionals working with individuals with serious mental illness.

At such meetings, in addition to learning about new findings in the field, one can attend presentations often given by the developers of the actual intervention of interest, and even have the opportunity to interact with these professionals and ask questions. See ❯ Table 8.2 for additional conferences.

8.8.4 Seek Out Workshops and Other Specialized Training Opportunities

While the number of psychology graduate programs offering courses in empirically supported interventions for schizophrenia remains fairly small, it is worthwhile to search for courses or seminars of interest at local universities with masters or doctoral programs in clinical psychology, social work, or counseling psychology, or within psychiatry, psychology, or social work departments of university-affiliated medical centers.

At some conferences, half- or full-day workshops are often available to provide training in interventions such as CBT for psychosis and family psychoeducation.

8.8.5 Connect with Other Expert Practitioners and/or a Mentor in the Field

In reading books and manuals about these interventions of interest, expert professionals can be readily identified. Attending conferences, meetings, courses, and workshops provide excellent opportunities to connect with these experts. Because the field of psychosocial intervention in schizophrenia is still relatively small, most researchers and practitioners are quite amenable to interacting with clinicians interested in learning more about a

particular treatment. Finding an expert mentor is a terrific way to build expertise and be exposed to new opportunities for training.

8.8.6   Volunteer Time and Obtain Ongoing Supervision

Once one has participated in some of the aforementioned suggested activities, the next step toward expert competence is hands-on training and supervision. To gain expert competence in family psychoeducation, for example, seek out a clinician who provides this intervention and volunteer to co-lead some family sessions with him or her.

Ongoing supervision and consultation is key. If there is opportunity to provide treatment in a particular area, such as develop and run a social skills training group, or provide individual integrated dual disorders treatment, seek out ongoing appropriate supervision. This should involve initial treatment planning and case conceptualization, and weekly or biweekly phone consultation with the expert supervisor. Video or audiotaping treatment sessions (with clients' consent, of course) is ideal, as both clinician and consultant can review sessions and discuss techniques in detail.

8.8.7   Monitor Client Progress and Outcomes

An important way to evaluate one's own path to expert competence in a particular intervention is, of course, to monitor how the client is responding to the delivery of the treatment. For example, do family members receiving behavioral family therapy report reduced stress at home? Are the members of the social skills training group completing weekly homework worksheets? Has the client with alcohol dependence and schizoaffective disorder reduced his number of drinks per day? Frequent assessment of clients' progress – via both informal and formal measurement – can be an excellent gauge of clinician skill.

In addition, it is crucial to monitor the clinician's gains as well. This is often accomplished through specific treatment fidelity measures, best completed by the supervisor or consultant. Areas for improvement can be readily identified and strategies to increase adherence and proficiency discussed.

8.9   Summary

Schizophrenia, characterized by psychotic symptoms, negative symptoms, and cognitive deficits, can be one of the most debilitating psychiatric illnesses, resulting in significant impairment in social and occupational functioning. In addition, those with schizophrenia also often suffer from trauma and PTSD, co-occurring substance use disorders, and an increased risk for serious health conditions (e.g., HIV) and suicide.

Despite the often grave consequences of this disorder, in recent years several types of treatments have gained empirical support as helpful interventions to ease symptoms and improve functioning, including some antipsychotic medications, supported employment, assertive community treatment, integrated treatment for dual disorders, cognitive-behavioral therapy, family psychoeducation, illness management and recovery, cognitive remediation, and social

skills training. The successes of these interventions have created evidence-based hope that schizophrenia is a condition that is manageable, treatable, and from which recovery is a very realistic possibility.

For clinicians who work with people with schizophrenia, there are some important basic skills that must be developed in order to provide practical and effective treatment. These competencies include the adoption of a recovery and strengths-based, shared decision-making philosophy which is the cornerstone for the development of a strong working alliance with individuals with schizophrenia. Clinicians ought to have knowledge about several aspects of the disorder, solid assessment skills, and the ability to elicit the natural supports of the client, interact well with an interdisciplinary treatment team, and seek appropriate consultation. Additional basic skills in motivational enhancement, cognitive-behavioral therapy techniques, and the delivery of psychoeducation should be developed as well.

Exactly what constitutes "expertise" in the treatment of schizophrenia has not yet been standardized and it is quite rare for one individual to be a master of all of the empirically supported interventions for schizophrenia. However, there are some important expert competencies that when mastered, can significantly improve client outcomes, among these: provision of effective group interventions, family psychoeducation and/or behavioral family therapy, longer-term integrated treatment for dual disorders and standardized motivational interviewing, cognitive-behavioral therapy, supported employment, and cognitive remediation.

As discussed in this chapter, transition from a basic level of competence to an expert level of competence in the treatment of schizophrenia in all areas of intervention is generally not a realistic goal, nor available training-wise. Nevertheless, there are a variety of ways to gain expertise in these areas. Reading up on treatments of interest, seeking out available courses and workshops, and connecting with other experts in the field are excellent initial steps toward expertise in a particular intervention. Finding opportunities for real-world practice and delivery of these interventions, coupled with ongoing supervision and consultation with a trained clinician, can have a tremendous effect on clinicians' abilities to deliver these important interventions, while conferring significant benefits to clients with schizophrenia over time.

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9 Borderline Personality Disorder

Darcy C. Norling · Soonie Kim

Abstract: Borderline Personality Disorder (BPD) is a devastating and stigmatizing disorder. Many therapists refuse to treat this population due to the severe pathology involved. BPD patients' extreme emotional and behavioral dysregulation including anger directed at the therapist and impulsive, life threatening behavior can be tremendously taxing on the therapist, not to mention heighten their ethical and legal risk. Dialectical Behavioral Therapy (DBT), a psychosocial treatment that combines cognitive-behavioral theory and methods with eastern meditative principles and practices, has changed this picture significantly. Several randomized clinical trials have demonstrated DBT to be the most hopeful and helpful of any new therapy available for people with BPD. As icing on the cake, it also provides a very stimulating and rewarding experience for the therapist. As such, many therapists are clamoring to learn the treatment. Although there is a wealth of information that describes the treatment itself, very little has been written regarding the necessary steps to provide it well. In this chapter we offer guidelines on how to achieve competency in DBT and further discuss how to move from beginning to expert status. The information presented has been gleaned over the last 15 years; from both formal training in DBT as well as personal experience providing full fidelity DBT "in the trenches".

9.1 Overview

Borderline Personality Disorder (BPD) is a debilitating disorder characterized by emotional and behavioral instability. The diagnosis of BPD is a chronic condition that traditionally has not responded well to standard community-based outpatient and inpatient treatment. Further, BPD is a stigmatized disorder resulting in negative attitudes and apprehension with regard to providing treatment (Lequesne & Hersh, 2004; Paris, 2005). One of the most challenging aspects is the fact that many clients with BPD engage in suicidal behavior. This fact greatly increases the anxiety of therapists, as they worry about the legal and ethical dilemmas that accompany suicide.

In addition, many clients with BPD struggle to control their anger and experience high amounts of conflict within their relationships. Anger is often turned toward the therapist, creating increased emotional vulnerability in the therapist and consequently leading to high burn-out rates.

With the creation of Dialectical Behavioral Therapy, however, many of these concerns have been alleviated. Marsha Linehan has transformed the way in which individuals conceptualize and treat BPD, which in turn has resulted in less burn out for therapists and more successful treatment outcomes.

Linehan and her colleagues have conducted many research studies which have resulted in less judgmental and more specific characteristics of BPD. These characteristics fall into the five

following areas of dysregulation: (1) emotional, (2) interpersonal, (3) cognitive, (4) behavioral, and (5) self (Linehan, 1993a).

9.1.1   Emotional Dysregulation

Emotional dysregulation refers to rapidly changing and intense emotions. Many researchers feel emotion dysregulation is the most significant problem for those diagnosed with BPD (Linehan, 1993a). They are extremely sensitive (even minor disturbances set them off), easily reactive (quick to jump to extremes), and have a difficult time returning to their baseline (Linehan). Anger and frustration are particular emotions that many individuals diagnosed with BPD struggle with. It is not uncommon for them to become physically or verbally aggressive when feeling angry.

9.1.2   Interpersonal Dysregulation

Many individuals diagnosed with BPD have extreme difficulty within relationships, often experiencing high amounts of conflict. The relationships of those diagnosed with BPD are likely to be unstable and rapidly changing from infatuation and joy to being filled with rage, anger, and hatred. In addition, individuals diagnosed with BPD generally fear being left alone and are likely to misinterpret cues as evidence of rejection or impending abandonment. When they sense a relationship is coming to an end, they often become panicked and filled with anxiety. They are likely to experience catastrophic thoughts, such as fearing they will "never find someone else" or that "they will be alone forever" and will often engage in extreme and risky behaviors (e.g., attempt suicide, become aggressive, self-harm) to avoid being left alone.

9.1.3   Cognitive Dysregulation

Many individuals diagnosed with BPD experience unhelpful and problematic thoughts and/or a disconnection from reality during times of extreme stress. They are likely to experience paranoid or negative thinking. For example, they may believe that they are being negatively evaluated or judged or fear that someone is intentionally trying to cause them harm. They often display "extreme" thinking or "black or white" thinking in which they only see their interpretation of the event. In addition, individuals diagnosed with BPD have periods of dissociation (tuning out, numbing out, "foggy state"), especially when they are under extreme stress. Dissociation often serves as a way to distract or cope with the negative emotion or event they are currently experiencing.

9.1.4   Behavioral Dysregulation

Individuals with BPD often engage in risky and impulsive behaviors that result in harm to themselves or to others. Such behaviors may include sexual promiscuity, spending sprees, substance abuse, and rage outbursts. In addition, recurrent suicidal behavior, gestures, threats,

or self-mutilating behavior are quite common. Such behavior is one of the primary reasons therapists experience great trepidation about working with this population.

9.1.5 Self-Dysregulation

Individuals diagnosed with BPD often report a lack of knowing one's self and feeling empty inside. They often express they do not know who they are or what they want out of life. The state of emptiness is extremely unsettling and uncomfortable. They may describe this feeling as having a "deep hole inside" or as a "void." The experience of not knowing one's self often results in such individuals behaving differently based on the situation or the context of the interaction.

9.2 Recognition of Symptoms and Their Assessment

A primary goal of the initial assessment session is to arrive at an accurate diagnosis and plan for treatment. This can be extremely challenging when working with individuals with BPD because rarely do such clients present to treatment for help with their personality disorder. Instead, individuals with BPD and other personality disorders are likely to present for treatment due to one or more Axis I conditions. Treatments that are geared at only the Axis I disorder are often ineffective and result in the therapist concluding the presentation as atypical or referring to the client as unmotivated and/or unwilling to change (McClanahan, Kim, & Bobowick, 2003). In any event, the end result is that a potentially helpful treatment which does not produce the intended changes and therapy is ineffective and often terminated. It is therefore crucial that attention to the diagnosis of possible personality disorders occurs within a broader context of a general clinical interview (McClanahan et al., 2003).

It is helpful to remember the five areas of dysregulation (i.e., self, cognitive, behavioral, emotional, and interpersonal) when assessing for BPD. Information regarding each of these areas should be gathered from a variety of measures in order to ensure the most accurate and thorough assessment. The following are the most standard means of assessment: (1) clinical interview (using questions from structured interviews, emphasizing a detailed relationship history, and including direct observations of the client in session), (2) collateral information, and (3) self-report measures.

9.2.1 Clinical Interview

The clinical interview is likely the most widely used method for gathering information and can provide valuable information. During the clinical interview, it is critical that specific details be gathered regarding past behavioral and psychiatric experiences. It is especially important to inquire about the individual's past experiences in therapy and relationships. Other areas to address include: work/school history, substance use, self-harm and suicidal behaviors, hospitalizations, childhood history, developmental concerns, traumatic experiences, legal history, and other impulsive/compulsive behaviors (e.g., spending money, eating, sexual behavior).

Using a structured diagnostic interview (or parts of one) can assist in gathering pertinent information to make an accurate diagnosis. The Structured Clinical Interview for DSM-IV Axis II (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997) is one such structured interview that can be used. It asks a variety of questions that screen for the areas of dysregulation associated with BPD. In addition, the Suicide Attempt Self-Injury Interview (Linehan, Comtois, Brown, Heard, & Wagner, 2006) is used to measure detailed information regarding recent non-suicidal self-injury and suicidal behavior. Examples of outcome variables include: frequency of self-injury and suicidal behaviors, medical risk of such behaviors, and impulsivity.

As noted earlier, the clinical interview should focus a great deal on past relationships. The following list provides examples of relationship descriptions that may be suggestive of BPD: moving quickly from extremes between idealization to intense devaluation, relationships with high conflict that may end impulsively and quickly, discussion of feared rejection by others, and impulsive behaviors done to avoid abandonment.

During the clinical interview, it is also useful to observe in-session behavior. For example, how does the client respond to feeling frustrated or angry? Although in-session behavior will definitely be important to observe, it is likely that during an initial assessment phase, the individual may not display overt symptoms of BPD. In fact, depending on their current stress level, they are likely to present as quite pleasant, socially adept, and appropriate in session. This is a primary reason why this disorder is easily missed early in treatment and why it is necessary to gather collateral information.

9.2.2 Collateral Information

Gathering releases in order to communicate with past treatment providers is a crucial task during the initial assessment and is especially true when working with clients who may be diagnosed with BPD. As discussed earlier, such individuals often display "extreme" thinking and may have skewed interpretations of situations. It is challenging to gather accurate information during the initial assessment phase due to these problematic thought patterns. Past providers can provide a great deal of pertinent information regarding the client's history. It may also be helpful to gather information from other sources, such as family members, friends, and employers.

9.2.3 Self-Report Measures

Self-report measures can also be very helpful when diagnosing and treating an individual diagnosed with BPD. Linehan utilizes a great number of self-report measures in her research clinic to assess for a variety of factors. For example, the Reasons for Living Inventory (Linehan, Goodstein, Nielson, & Chiles, 1983) is used to assess a client's expectations for living or killing oneself and the importance of a variety of reasons for living. The Borderline Symptom List (Bohus et al., 2007) is used to assist in diagnosing BPD. Such measures can help a clinician to determine the diagnosis, suicidal risk, specific treatment targets, and also assist in measuring changes throughout the treatment.

In addition to self-report measures geared specifically for BPD, we also recommend a general measure of emotional and behavioral distress, such as the Outcome Questionnaire

(OQ-45.2, Lambert et al., 1996), which is given to clients during the initial assessment phase and throughout treatment. The three areas of functioning accessed are: symptom distress (e.g., how a person feels inside), interpersonal relations (e.g., how a person gets along with significant others), and social role (e.g., how a person is doing in important life tasks such as work and school, Lambert et al.). It also assesses for such risk factors as suicide and substance use. Such a measure will help to determine the client's current functioning in a variety of domains and provides an additional means of assessing for change throughout treatment.

9.3   Maintenance Factors of the Disorder

When examining the factors that maintain BPD, an important place to begin is with a discussion of the factors involved in the development of the disorder. These factors are likely to also play a role in the maintenance of the disorder. The biosocial model proposed by Linehan (1993a) provides the theory behind DBT and an explanation of how and why problematic behaviors arise. In addition, there are things individuals learn through their enviroments that contribute to the maintenance of the behavioral and emotional dysregulation evident in those diagnosed with BPD.

Biosocial Model. According to Linehan (1993a), BPD is primarily a dysfunction of the emotional regulation system that results from both a biological vulnerability and a dysfunctional environment. DBT terms this the biosocial theory, which states that BPD occurs as a result of the interaction between an individual's innate emotional vulnerability and an invalidating environment. Having a biological emotional vulnerability suggests that certain individuals are born with an increased emotional vulnerability and have difficulty regulating their emotions (Linehan). Three factors characterize someone who is emotionally vulnerable: (1) a high degree of sensitivity, (2) high reactivity, and (3) a slow return to baseline. According to the biosocial theory, this emotional vulnerability interacts with an invalidating environment.

An invalidating environment is one in which the communication of private/internal experiences is met by inconsistent, extreme, and unacceptable responses; regardless of the validity of the experience (Linehan, 1993a). An invalidating environment has three primary characteristics. First, it communicates that what you are thinking, doing, or feeling is inaccurate, inappropriate, or wrong (e.g., "You shouldn't feel sad," "There is no reason to be mad"). The invalidating environment also rejects or punishes emotional displays (e.g., "You are just trying to get attention," "Cry-baby") and often only attends when the child displays strong, emotional outbursts. Finally, the invalidating environment oversimplifies the difficulty of solving a problem (e.g., "Just get over it," "Why can't you just feel happier").

It is the transaction between the emotional vulnerability and the invalidating environment that results in the severe dysregulation exhibited by those diagnosed with BPD. For example, the emotionally reactive child who is told that her feelings are inaccurate may have difficulty trusting her own internal experience and will rely on others to determine what she "should" be feeling. Because she is always looking to the environment to know what she feels, she struggles to develop a sense of self. In addition, the emotionally sensitive child who is only attended to when she screams and yells learns that the only way to gain support is to display a huge emotional outburst. She is never taught how to label or regulate her emotions. Behaviors such as cutting, threatening suicide, overdosing on pills, and burning become the manner in which these individuals regulate their emotions. Finally, the emotionally sensitive child who is told to

"just get over it" is not able to form realistic goals and never learns how to cope with emotions. She struggles to tolerate emotional distress and therefore engages in impulsive behaviors in order to decrease the distress (in the short term) and gain support.

The extreme emotional and behavioral dysregulation displayed by individuals diagnosed with BPD impacts their ability to form and to maintain stable and strong relationships. Such relationships require a stable sense of self and an ability to regulate emotions, both of which these individuals lack. Conflict within relationships is one of the most common stressors faced by individuals diagnosed with BPD and often leads to self-harm and suicidal behavior. Further, their strong emotional reactivity and sensitivity is likely to result in continued invalidation within their relationships, which unfortunately maintains the problems mentioned above.

Models of Learning. What an individual learns through life experiences increases or decreases the likelihood of problematic behaviors continuing. There are three primary modes of learning: modeling, operant conditioning, and respondent conditioning. Modeling involves watching another individual's behavior and then attempting to replicate what was observed. For example, a child watches his or her mother use a spoon to eat and then takes a spoon and attempts to mimic her behavior. Another example would be a child who watches his or her father behave violently toward the family and then begins to behave aggressively toward his or her toys.

Operant conditioning is learning through consequences. Whatever occurs immediately following the behavior either increases or decreases the likelihood that the behavior will occur again. Positive factors, such as praise and money, increase the likelihood of behavior continuing and negative factors, such as punishment or shame, decrease the likelihood of the behavior continuing. For example, a child works hard in school in order to earn a prize (e.g., cell phone). The prize serves as a positive reinforcer and increases the likelihood that the hard work in school will continue.

Finally, respondent conditioning is learning through association. Learning occurs when a natural, automatic response is paired with a neutral cue, to the point that the cue automatically produces the response. For example, a child is repeatedly terrorized after school by a gang of kids (natural response is fear). As a result, the child develops a strong fear of school (previously neutral cue). When he or she simply looks at, or drives by, his or her school, he or she automatically feels panic (the cue of school now elicits the panic). Both operant and respondent conditioning play significant roles in the maintenance of BPD.

According to operant conditioning, behavior that is reinforced whether positively (i.e., providing a "rewarding" consequence) or negatively (i.e., removing a negative consequence) is likely to continue. A factor that greatly contributes to the maintenance of BPD is that the problematic behaviors that generally accompany this disorder work (i.e., produce positive and/or negative reinforcement), at least in the short term. Consider, for example, an individual who gets into an argument with her boyfriend during which he threatens to leave. She tells her boyfriend she is going to take pills to kill herself and her boyfriend, fearing her death, immediately calms and provides her with comfort. This individual was both positively and negatively reinforced for her behavior of threatening suicide. She was provided with comfort (positively reinforced) and the argument stopped (negative reinforcement). Both of these factors increase the likelihood that this individual will engage in similar behavior the next time she is in an argument.

This behavior often turns into a pattern quickly because the maladaptive behavior is reinforced and learning of coping skills or new behaviors does not occur. For example, suppose a

negative life event occurs (e.g., argument with a friend, losing a job) and as a result, the individual feels sad, angry, or anxious. An individual with BPD who has not learned effective coping skills may engage in some maladaptive behavior in order to regulate these emotions (e.g., self-harm, suicidal behavior). This behavior is then reinforced because she feels better, at least in the short term; however, this behavior does not teach her new ways of coping and may lead to a long-term result of increased negative life events. As a result, the next time a negative event occurs, she is likely to engage in the same maladaptive behavior.

With respondent conditioning, an association is learned and continues to effect behavior, even when it no longer makes sense. For example, a neglected child is left alone and this triggers fear. Then as an adult, being alone or even just thinking about being alone triggers fear. When this occurs, it is likely that this individual will engage in frantic efforts to avoid being left alone in order to avoid the anxiety. Because he or she takes great efforts to never be alone, he or she is not provided with the opportunity for new learning to occur. In other words, because he or she avoids being home alone, he or she does not have the opportunity to find out what would happen if he or she stayed alone, and, therefore, his or her fear continues.

9.4 Treatment Overview

Until quite recently, treatment for BPD appeared quite hopeless. Throughout the last 2 decades, however, Linehan and her colleagues have developed a treatment called Dialectical Behavioral Therapy (DBT) that is shown to be effective in treating BPD (Linehan, 1993a, b). It has the distinction of being one of the first psychosocial treatments demonstrated to be effective in a randomized clinical trial (Linehan, Armstrong, Suarez, Allmon, & Heard, 1991). Although other treatments (Bateman & Fonagy, 1999, 2001; Giesen-Bloo et al., 2006; Marziali & Munroe-Blum, 1994) have demonstrated efficacy in providing treatment for BPD, DBT currently has the most empirical support and is thought of as the primary treatment for the disorder (Linehan & Dexter-Mazza, 2008). Because the purpose of this chapter is not to present a thorough description of the treatment, only a concise overview of the treatment will be provided. For a complete explanation of DBT, please refer to Marsha Linehan's main text (1993a) and accompanying skills manual on DBT (1993b). This section will briefly cover the following aspects of the treatment: (1) research to date, (2) differences between DBT and CBT, (3) secondary targets, (4) stages of treatment, (5) functions of treatment, and (6) treatment strategies.

9.4.1 Research to Date

DBT has been evaluated in six randomized control trials conducted across three independent research teams (Koons et al., 2001; Linehan et al., 1991, 1999, 2002, 2006; Linehan, Heard, & Armstrong, 1993; Linehan, Tutek, Heard, & Armstrong, 1994; Verheul et al., 2003). The results have shown DBT to be an effective evidenced-based treatment for BPD (Linehan & Dexter-Mazza, 2008). Participants treated with DBT demonstrated significantly greater reductions in suicide attempts, intentional self-injury, and suicidal ideation (Koons et al., 2001; Linehan et al., 1991, 1999, 2002; Verheul et al., 2003). In the original study of recurrently suicidal patients with BPD, participants treated with DBT were significantly less likely than those receiving treatment as usual to attempt suicide or engage in nonsuicidal self-injurious behavior, were

less likely to drop out of treatment, had fewer inpatient psychiatric days per participant, and improved more on scores of global and social adjustment (Linehan & Dexter-Mazza, 2008).

9.4.2   Differences Between DBT and CBT

DBT was developed out of cognitive-behavioral treatment for BPD. According to Linehan (1993a), DBT differs from CBT in four primary ways: (1) the focus on acceptance and validation of behavior as it is at the moment, (2) the emphasis on treating therapy-interfering behaviors, (3) the emphasis on the therapeutic relationship as an essential tool for change, and (4) the focus on the dialectical process. The theoretical orientation originates from three fundamental theories: behavioral principles, Zen philosophy, and dialectics. Behavioral change strategies are met with acceptance of the client and are balanced within a dialectical framework (Linehan & Dexter-Mazza, 2008). Although DBT is grounded in behavioral principles, its strategies and techniques pull from a variety of other orientations, including psychodynamic, client-centered, and cognitive therapy.

9.4.3   Secondary Targets

As noted earlier, DBT views BPD as primarily an emotion regulation problem which stems from the interaction of an individual's biological emotional vulnerability and an invalidating environment. The combination of emotional vulnerability with an invalidating environment presents many dilemmas for individuals diagnosed with BPD (Linehan, 1993a). These dilemmas impact both the therapist and the client's emotions and behaviors and are considered secondary targets within DBT. There are six primary behaviors that are dichotomized into a set of three polar-opposite behaviors. The first behavior is emotion vulnerability (e.g., the sense of being out of control, emotional sensitivity) and self-invalidation (e.g., hate toward oneself) (Linehan). The second behavior is active passivity (e.g., approaching problems helplessly) and apparent competency (e.g., appearing competent and able to cope). The final behavior is the unrelenting crisis (e.g., perpetual crisis) and inhibited grieving (e.g., avoiding extreme and painful emotions).

These patterns of behavior help to maintain the severe behavioral dysregulation. Treatment involves confronting the behavioral extremes and then forming a synthesis of these behaviors.

9.4.4   Treatment Stages

DBT is divided into five treatment stages with accompanying treatment goals. Clients can enter at any stage based on their current level of functioning. First, a pretreatment stage is spent orienting the client to treatment and eliciting commitment to work toward specified goals. In Stage 1 of treatment, the primary goal is on gaining behavioral control. In the first stage, there are four main targets: decreasing life-threatening behaviors (e.g., self-harm, suicide attempts, serious suicidal intent), decreasing therapy-interfering behaviors of both the client (e.g., showing up late, not completing homework) and the therapist (e.g., reinforcing dysfunctional

behavior, not returning phone calls), decreasing quality of life-interfering behaviors (e.g., major depressive episodes, substance use, eating disordered behavior), and increasing behavioral skills (e.g., emotion regulation, distress tolerance, interpersonal effectiveness, self-management, and mindfulness). All research to date has focused on this first stage of treatment (Linehan & Dexter-Mazza, 2008).

The second phase is aimed at moving a client from quiet desperation, which is defined as a place of extreme emotional pain in the presence of control of action (Linehan et al., 1999), to nontraumatic emotional experiencing. Goals in this stage are the following: accepting the facts of earlier traumatic events, reducing self-blame associated with traumatic experiences, reducing the oscillating denial and intrusive responses, and reducing dialectical tensions regarding placement of blame for the trauma (Linehan & Dexter-Mazza, 2008).

The third stage is geared at resolving problems in living and increasing self-respect and moving toward a place of ordinary happiness and unhappiness. The targets are for the client to gain independence and to trust in one's own feelings and responses. Finally, the fourth stage is aimed at reducing the feeling of incompleteness and developing the capacity for sustained contentment. The goal is for the client to gain expanded awareness and spiritual fulfillment.

9.4.5   Treatment Functions

DBT treatment is structured around the five primary functions of the treatment (Linehan, 1993a). The first function is to enhance behavioral capabilities by expanding the individual's knowledge of skillful behavior. This is accomplished through a weekly skills group. Skills acquisition within an individual therapy session is extremely difficult because of the need to address the high number of crisis behaviors and provide ample attention to the other target behaviors. There are four skill modules (i.e., mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness) taught on a rotating, ongoing basis over the course of 6 months. Linehan's program requires client's to participate in a 1-year skills training, which entails repeating each of the skill modules.

The second function is to increase the client's motivation to change by reducing reinforcement for ineffective behaviors and high probability responses that interfere with effective behaviors. This is accomplished primarily through weekly individual therapy. The third function is to ensure that new behaviors generalize from the therapeutic to the natural environment. Telephone coaching serves to meet this function. Telephone coaching also follows a target hierarchy to: (1) provide emergency crisis intervention and break the link between suicidal behavior and therapist attention; (2) provide coaching of skills; and (3) provide an opportunity for the client to repair the therapeutic relationship (Linehan & Dexter-Mazzo, 2008).

The fourth function is to enhance motivation and capabilities of the therapist. This is accomplished through the team consultation meeting. DBT believes that it is crucial to spend a great deal of time focusing on the therapist's experience and behavior within a session. The team consultation is a therapy for the therapist and serves to treat burnout and promote adherence to the model. Every therapist is required to be on a consultation team. The fifth function is to structure the environment so that effective, rather than dysfunctional, behaviors are reinforced. This is accomplished through ancillary care services, including consultation to the client, environmental intervention, and team consultation.

9.4.6   Treatment Strategies

DBT utilizes five sets of treatment strategies: (1) dialectical strategies; (2) core strategies; (3) stylistic strategies; (4) case management strategies, and (5) integrated strategies. Within any given treatment session, a combination of these techniques is used. Some may be used more frequently than others, based on the needs of the client. A brief overview of the first three will be provided.

The dialectical strategies encompass all aspects of DBT treatment. These strategies inform the entire treatment. The strategies have evolved out of a dialectical philosophical position that views reality as a wholistic process in a state of constant change (Linehan, 1993a). The primary dialectic within DBT is acceptance and change. This balance is demonstrated within all interactions with the client by utilizing various treatment strategies.

Validation and problem-solving strategies make up the core of DBT. Validation strategies target acceptance. These strategies communicate an understanding of the client's thoughts, emotions, and behaviors in the current context. The problem-solving strategies, on the other hand, target change. The therapist engages the client in analyzing his or her own behavior, committing to change, and taking steps to change the behavior (Linehan, 1993a).

Finally, stylistic strategies refer to the style and the form of therapist communication. These strategies provide guidelines for how the therapist implements other treatment strategies. Style has to do with tone, edge, intensity, speed, and responsiveness. There are two primary communication styles with DBT: reciprocal and irreverent. The reciprocal style suggests responsiveness, self-disclosure, warmth, and genuineness (Linehan, 1993a). The irreverent style is unhallowed, impertinent, and incongruous (Linehan). These two styles represent poles of a dialectical stance and must be balanced.

9.5   Mechanisms of Change Underlying the Intervention

DBT aims to change or interrupt the maintenance factors associated with BPD. According to Linehan (1993a), the therapist aims to create a validating, rather than a blaming, environment in which he or she impedes or extinguishes ineffective behaviors, drags skillful behaviors out of the client, and attempts to make the skillful behaviors very reinforcing so that the skillful behaviors replace the ineffective behaviors. We believe these are some of the most critical factors in creating this change: (1) the therapeutic relationship, (2) thinking dialectically, and (3) properly assessing why the behavior is occurring.

9.5.1   Therapeutic Relationship

The therapeutic relationship is one of the most important tools for change. Establishing a strong relationship from the beginning is crucial. The relationship between the therapist and the patient is often the strongest reinforcer for individuals diagnosed with BPD. Utilizing the stylistic strategy of radical genuineness is the key to establishing a strong relationship with a client. This involves taking a stance of equality with a client and participating in a real relationship.

It is important to address upfront and early in the relationship that the therapeutic relationship may be (and likely will be) negatively affected through the course of treatment and what each party agrees to do, if this should occur. For example, a client may become angry at his or her therapist for showing up late to session or a therapist may feel burnt-out due to a client paging many times throughout the night. How will the client and therapist handle their emotions? Will they simply avoid the issue or will the problem be handled directly? Deciding how such things will be addressed and then following through on these commitments are crucial steps in maintaining a strong relationship.

9.5.2 Thinking Dialectically

Assisting the client in behaving more dialectically is an overriding and pervasive target within DBT. The goal is to help clients to think and behave in a more balanced manner. Clients are encouraged to see reality as complex and multifaceted, with no absolute truth. Teaching clients to be comfortable with inconsistency and contradictory thoughts and helping them to integrate such polarities into a synthesis will assist clients in changing the "all or nothing" or "black and white" thinking patterns that are common with individuals diagnosed with BPD (Linehan, 1993a). Therapists must try to reinforce both a dialectical style of thinking and approaching problems and challenge nondialectical thinking and behaving (Linehan).

As noted earlier, the dialectic of acceptance and change represents the central dialectic in DBT. Effectively balancing of these two extremes is crucial for change to occur. The therapist must move back and forth between these two poles. The goal is to move the client slightly off balance so that his or her behavioral, emotional, and cognitive rigidity is difficult to maintain (Linehan, 1993a). The therapist must be alert and move with certainty and wholeheartedness. Linehan compares the use of dialectics in a relationship to ballroom dancing. The therapist must meet the client where he or she is. According to Linehan, the initial goal of the therapist is to move the client slightly off balance, with a hand guiding the movement so that eventually he or she will relax and be moved by the music.

9.5.3 Assessing the Problem

There are a variety of factors that result in, and maintain, a client's ineffective behavior. It is important to assess the "cause" or the "why" in order to produce beneficial change. Without a proper assessment (done through a thorough behavioral analysis), it is challenging to know how to intervene. If we simply guess what is maintaining/causing the behavior, it is likely that the treatment will be very ineffective and perhaps, even damaging to the client. Think of the analogy of putting diesel fuel into a car that runs on unleaded gas to clarify this idea. There are generally four primary reasons for a client to not act skillfully: (1) skill deficit, (2) contingencies or consequences, (3) strong emotions, and (4) unhelpful thoughts.

A client may not have the "tools in the toolbox." In other words, if a client does not have the knowledge or the understanding of the skill, then teaching the client these skills is a crucial first step. After all, how is a client expected to behave skillfully when he or she is unaware of what constitutes a skillful behavior? The skills or abilities taught in the DBT group sessions serve to

address this concern. These skills specifically target the areas of dysregulation associated with BPD. Through learning these skills, the clients are better able to behave effectively.

If the client has the skills, then what is getting in the way of her acting skillfully? Sometimes "using the tools is not as reinforcing as not using the tools." In other words, it may be more reinforcing (at least in the short term) to not act skillfully. For example, recall the client who got into a fight with her boyfriend and threatened to commit suicide in an attempt to get him to not end the relationship. When the boyfriend decided to stay in the relationship, the client was reinforced and learned that acting impulsively, rather than skillfully, is the way to get what she wants.

Contingency strategies must be put into place. Factors must be constructed to make it more rewarding to use the skills than to act impulsively. These strategies often change behavior through operant conditioning. For example, in order to strengthen an effective behavior (e.g., calling for coaching), you add a reinforcer (e.g., praise) and remove an aversive consequence (e.g., distress decreases). In order to weaken or suppress a dysfunctional behavior (e.g., cutting), you withhold a reinforcer (e.g., limit contact with therapist after behavior has occurred) and maintain or add an aversive consequence (e.g., no contact with therapist for 24 h). These principles will shape the desired behavior.

Sometimes the problem is that the client is "too upset to find/use the right tool." Strong emotions may get in the way of skill use. As noted earlier, Linehan (1993a) conceptualizes BPD as primarily a deficit in regulating emotions. Individuals with BPD have intense, rapidly changing emotions that result in a difficulty in demonstrating skillful behavior. Further, past traumatic events result in many individuals diagnosed with BPD experiencing unresolved, intrusive emotional reactions associated with stress. Some of the common symptoms of BPD may be directly related to these ongoing emotional responses. For these reasons, exposure to emotions (with response prevention) is often a necessary ingredient in the treatment. Such exercises allow for opportunities to practice coping with strong emotions skillfully.

Finally, another factor that inhibits skillful behavior is "figuring that the tools won't work." Thoughts often impact a client's ability to act skillfully. As noted earlier, extreme thinking is a common characteristic of individuals diagnosed with BPD. Addressing these problematic thoughts can be done through cognitive restructuring techniques. This may help clients to understand what factors contribute to such thinking, how they can know when to trust themselves, and what they can do to modify their extreme beliefs. Self-invalidation (which is also a secondary target in DBT) is another example of how negative beliefs can get in the way of behaving effectively. Modeling validation to clients and having them practice stating self-validating statements in therapy (behavioral rehearsal) can help to modify such thinking.

9.6   Basic Competency

The University of Washington is currently working on establishing formal criteria so that clinicians can become credentialed in DBT and programs can become accredited; however, these criteria are still a work in progress. Included in this endeavor will be the development and dissemination of adherence measures that will make it easier to know if what people are calling DBT is, in fact, really DBT. Although the following information is certainly not "the path to DBT enlightenment," it does serve as a compilation of ideas based on our experience over

several years developing and maintaining a full-fidelity DBT program; a journey that has involved training and supervising many DBT therapists along the way.

Webster's Dictionary defines competence as having "suitable or sufficient skill" and being "adequate but not exceptional." What does a therapist need to know to be adequate at providing DBT? What skills and abilities does a competent DBT therapist possess? It is our experience that the initial DBT learning curve is a steep one requiring knowledge and skill across a number of areas (see Linehan's text 1993a and accompanying skills training manual 1993b for elaboration). At the very least, however, we believe a competent DBT clinician should know the following: (1) the biosocial model, (2) the fundamentals of validation, (3) the function of treatment components and how to structure them, and (4) the dialectics.

9.6.1   The Biosocial Model

According to Linehan (1993a), the purpose of a theoretical model is to offer a shorthand way to think about clients, which guides us in creating a new therapy for each client. The biosocial model of DBT provides a way to conceptualize and solve problems according to the models of learning (operant and respondent) and a tool to do so (functional analysis). Thus, it is essential for a competent DBT clinician to know how to conduct a behavior chain including accurately identifying and defining the appropriate behavior to target, what questions to ask to garner information about links in the chain that led up to, and followed, the target behavior, and how to use this information to develop causal hypotheses and possible solutions. With regard to solutions, a competent DBT therapist should also be grounded in CBT, as many of the interventions proposed in DBT are born out of this approach (e.g., psychoeducational skills training, cognitive restructuring, exposure therapy, and contingency management techniques).

9.6.2   The Fundamentals of Validation

The change-based stance in DBT of problem-solving is balanced with one of acceptance, and the core strategy in this area is validation. Basically, validation communicates to the client that his or her responses are real, make sense, and are understandable within his or her life context or current situation. The competent DBT therapist should know when and how to use validation strategically as a way to de-escalate emotions and foster cooperative interaction, provide balance when pushing for change, as reinforcement for clinical progress, and strengthen the therapeutic relationship.

9.6.3   The Function of Treatment Components and How to Structure Them

A competent DBT clinician knows how to begin treatment (i.e., conduct a thorough assessment, orient to treatment, and develop initial treatment targets and build commitment toward working on them), as well as how to structure individual sessions, conduct a skills training group, and respond to telephone consultation calls. Across all components, doing adequate DBT requires knowing your role (e.g., primary duties and responsibilities), given the particular

service you are providing, and being able to identify the appropriate treatment stage and target when interacting with your clients.

Put simply, individual therapy functions to inhibit clients' "bad behavior" (usually effective in the short term but not over the long run) and drag out the good (new, more skillful behavior). Attending to the structure of individual sessions involves mastering many basic skills (e.g., knowing how to open and close a session, review diary cards and homework, as well as how to recognize and treat therapy-interfering behavior as it occurs in session). Working toward mastery can take some time, however, as many DBT therapists have experience in struggling to obtain consistently completed diary cards from their clients. However, this seemingly minute element of DBT cannot be sacrificed for several reasons: (1) self-monitoring is a pivotal skill for clients to learn as part of a self-management program, (2) completing a diary card sets a precedent for clients doing work outside treatment, and (3) the information contained on the card helps set an initial agenda for the session and keep the clinician on track.

The function of group skills training is skills acquisition or teaching new behavior. Regarding structure, a competent DBT clinician should know how to open and close a group, conduct a mindfulness practice, as well as how to teach skills in an active and engaging way. Needless to say, managing a group of individuals who are emotionally and interpersonally sensitive can be a challenging endeavor. This, combined with having a wealth of material to cover in a limited time frame, complicates the process even more. For example, the group leader can easily get sidetracked with one or more members who want to process their "crisis d'jour" in group. To address this situation, the competent DBT therapist is adept at a wide variety of interventions, for example, properly orienting the group ahead of time as to how situations like this will be handled including the rationale for doing so, gracefully weaving a client's discourse into the skills topic at hand, and enlisting the individual therapist's help to shape up the client's group-interfering behavior.

Although telephone consultation serves several functions, the primary goal is to promote generalization of skillful behavior to natural contexts (i.e., to get the client to deal more effectively with problems in their outside lives; when and where they actually occur). This involves amongst many other things, knowing what strategy or skill to use given the situation, knowing what to do when a client responds repeatedly with "yes, but" and "nothing works" during a coaching call, following the 24 h rule to prevent inadvertently reinforcing self-harm behavior with therapist attention, and knowing how to identify and treat inappropriate calls (e.g., too many "supportive connection" calls after hours).

9.6.4 Dialectics

A dialectical world view has three primary characteristics: the principle of interrelatedness and wholeness, the principle of polarity, and the principle of continuous change (Linehan, 1993a). The competent DBT clinician should have an understanding of how these characteristics manifest themselves in treatment and the therapeutic relationship. For example, failing to adopt a dialectical stance of acceptance and change is one of the most common mistakes beginning clinicians make in DBT, which is often a primary factor underlying therapeutic impasses and reason for early termination. Clients who are pushed too hard for change are likely to feel overwhelmed, misunderstood, and perceive their therapist as cold and uncaring. This invariably

leads to the client requesting (or demanding as the case may be) a change in therapists or dropping out of treatment altogether. On the other hand, a therapist who underestimates client capabilities, fragilizes his or her client, or overdoes for the clients runs the risk of fostering "active passivity" in their client (i.e., being overly dependent on their therapist to solve even the smallest of problems). This, in turn, is a major contributing factor to therapist burnout and is contrary to good outcomes for client and therapist alike.

Working with the population for which DBT was designed can be a challenging endeavor and so some have said "takes a certain type of person." Although anyone can learn DBT strategies and skills, some individuals seem to have an easier time than others. Many aspects of DBT are distinctly different than traditional therapy and therapists who come with a preconceived notion of what therapy should look like, whether by personal experience or previous training, may have greater difficulty with reaching competence. For example, self-disclosure, of either personal experience or involving a reaction to the client, is a strategy in DBT. However, many traditional therapies caution, if not prohibit, therapists from engaging in such disclosure. In addition, the active and directive style of a DBT therapist may be perceived as domineering and controlling for clinicians trained in a more "neutral" and "unfolding" approach.

With regard to style, in any given interaction with a client the competent DBT therapist strives to balance a reciprocal with irreverent communication, unwavering centeredness with compassionate flexibility, and nurturing assistance with benevolent demanding. In our experience, beginning DBT therapists seem prone to one style or the other and much of the supervision involves increasing their comfort level with, and ability to engage in, the opposing style. It is the strategic balance of both styles that allows the therapist to push the patient forward with one hand and support them with the other and flexibility and timing are the keys.

Most beginning DBT therapists seem more comfortable with reciprocal communication (i.e., a therapist style that is warm, caring, and supportive), as opposed to irreverence (i.e., a style that is matter-of-fact, offbeat, straightforward and at times, even playful). It is important for a competent DBT therapist to be able to do both equally well, as each has its use for achieving certain client goals.

Unwavering centeredness is the notion of believing in oneself, the therapy, and the client (Linehan, 1993a). It is being able to tolerate the pain or discomfort of what needs to be done in the short term, in order to get clients better over the long run. Compassionate flexibility, on the other hand, refers to the contrasting quality of being able to take in new information about the client and modify a previously held position. Needless to say, because DBT is a complex treatment, it is likely that the therapist will make many mistakes. The competent DBT therapist must be willing to acknowledge these mistakes, validate the client's experience, and do what is necessary to rectify negative outcomes.

Finally, nurturing assistance includes teaching, coaching, strengthening, and aiding the patient. Heightened awareness in this process is critical as without it, the therapist may miss subtle reactions to things done and said in therapy, by them or other group members. The provision of nurturing assistance is skillfully balanced with benevolent demanding; the therapist's recognition of the client's existing capabilities, push for adaptive behavior and self-control, and refusal to come to the client's aid when he or she can handle the situation on their own. (See ❯ Table 9.1 for a session rating form that can be used to evaluate basic adherence).

◻ **Table 9.1**
Portland DBT program, PC: Therapy session rating form
Therapist:_____ Reviewer and Date of Review: _____

Please comment accordingly
1. Diary cards are used in the session
2. Therapy session focuses on appropriate stage and target of treatment
3. Therapist balances irreverent and reciprocal communication styles
4. Therapy session is focused on skills acquisition, strengthening, and generalization
5. Therapist acts as a consultant to client
6. Therapist is dialectical in session: models or uses dialectical stance/strategies
7. Therapist uses core strategy of validation (specify level 1–5)
8. Therapist uses core strategy of problem-solving: formal problem and solution analyses
9. Other comments

9.7   Expert Status

Elaborating on the qualities of a DBT expert is both an exciting and daunting task. The underlying dialectical dilemma is, on the one hand, recognizing the importance of operationally defining what constitutes an expert in DBT and on the other, knowing if it is impossible to quantify many factors in the process. Similar to the idea of two chefs in a bake-off who follow the same cake recipe to the tee, yet in the end, one turns out better then the other. How did this occur? Perhaps it was due to the mood of the chef as he or she mixed together the cake's ingredients, how each cake was presented, the perceived reputation of the chef, or something on the part of the judges. The point of this analogy is twofold. First, expertise likely does not exist in any single person but is better defined by outcomes, and second, achieving expert results is probably a culmination of a number of complex, person–environment interactions at any given moment, as well as over time. That being said, discerning what factors contribute to differential outcomes is crucial when it comes to getting better at what we do. Although difficult, if not impossible, we must try.

How, then, is an expert DBT therapist able to produce more effective clinical outcomes more efficiently than a novice one? What does he or she actually do differently? Based on our experience, the expert DBT clinician has a firmer grasp on: (1) application of DBT to themselves and their team; (2) radical genuineness; (3) mindfulness; and (4) speed, movement, and flow.

9.7.1   Application of DBT to Themselves and to Their Team

The expert DBT clinician practices "what he or she preaches." This is a manifestation of the "parallel process in action," which means that the same things we do to get clients better (in treatment), we do to get therapists better at treating their clients (in supervision). The expert DBT therapist possesses a deeper understanding of both the client and the treatment as a result of applying the treatment in their own lives; to their own behavior and in their personal

relationships. For example, being adept at regulating emotion (e.g., anxiety) allows the expert clinician to feel more comfortable in session, thereby improving their capacity for creativity, ability to work with what is happening in the room, and strategically move from principle to protocol without missing a beat. In addition, heightened ability to see things "dialectically" increases the expert clinician's awareness of the many, transacting factors that create and maintain problems. The expert is constantly asking the question "what is being left out?" with particular emphasis on his or her own contribution to the problem as well as the solution.

On a related note, many beginning DBT therapists avoid confrontation (e.g., calling a spade a spade) as clients can be quick to get angry and verbally attack when challenged or conversely, easily fall apart and engage in high-risk or crisis-generating behavior. Both instances illustrate the dynamic of the therapist being punished for doing good therapy. Nevertheless, it is critical that DBT therapists use exposure therapy on themselves, so that they can confront when necessary (e.g., going to where angels fear to tread). For example, I (Soonie) recently worked with a woman who had been fired by her last three therapists. When asked why, she stated that each therapist, in one form or another, had told her she was "just too complicated" for them to work with. Not long into our treatment the reason became apparent, from start to finish of our sessions, the client was critical and attacking. No matter what I said or did, it was the wrong thing in her eyes. After our sessions I felt beat up, or more aptly put, like I "had been run over by a Mack truck."

In order to continue working with this client I had to confront the problem behavior head on (although the thought of doing so was terrifying to say the least). Although initially my feedback provoked heightened anger on her part, over time we were able to work through the problem and our relationship (and sessions) improved dramatically. By practicing opposite to emotion action on myself (basically exposure therapy), I was able to treat my client's "in-session dysfunctional behavior" effectively.

9.7.2 Radical Genuineness

The expert DBT clinician works to be radically genuine (i.e., equal to the client and engaged in a real relationship). For example, recently I (Darcy) accepted a quick page from a client on my cell phone. I was in the car with a friend and took the page, keeping confidentiality in mind. After getting off the phone, my friend stated, "You were just so you in the phone call." Radical genuineness reduces pressure on the therapist to "stay in the role" with their client which in turn, makes for more comfortable and rewarding interactions. Radical genuineness also creates an inherently validating experience for clients who communicate equality and respect (i.e., the therapist interacts in the same way with their client as they would with a family member or friend; clients are no better or worse and are entitled to the same treatment). Finally, a radically genuine relationship between a therapist and a client approximates the real-world relationships offering the opportunity for in vivo corrective experiences.

9.7.3 Mindfulness

Mindfulness functions to help the expert DBT clinician maintain moment-to-moment awareness of both the client's behavior and his or her own throughout their interactions. This

information is then used in an intentional way to promote a good working alliance between parties and enhance client progress in reaching their goals.

Mindfulness practice also enables the expert DBT therapist to let go of judgment and expectations of what should be, radically accepting the client just as he or she is at any particular point in time. Paradoxically, acceptance of "what is" often shifts clients to change, thereby moving them that much closer toward their goals. Inhibiting judgment (the experience of badness versus goodness, the desire to hold on to what feels good and push away what does not) is a challenging skill, particularly because clients' problems often occur in the context of relationship and have a direct and negative impact on the people around them – including their therapist. In this respect, inhibiting judgment helps the therapist regulate potentially damaging emotions (e.g., anger, frustration), which can disrupt the relationship and thwart client process. Adopting a nonjudgmental stance also opens the door to seeing things more clearly and critically (i.e., without bias, so that the therapist can more accurately identify and treat the problem at hand).

An expert DBT clinician not only uses mindfulness in his or her work, but also incorporates the principles and practices into his or her daily life. Although some argue that mindfulness practice outside the work setting is necessary for even a beginning DBT clinician, in our experience many DBT therapists do not engage in such practice. We have come to believe, however, that regular and disciplined mindfulness practice is absolutely necessary to move from being competent in DBT to becoming an expert. It is the actual experiencing, fully and deeply, of what concepts like judgment and acceptance really are which proves to be essential.

9.7.4   Speed, Movement, and Flow

The expert DBT therapist is adept at thinking on their feet. He or she is able to attend to the great influx of a client's behavior as it speeds by and organize it in ways that take into account both principle (e.g., conceptualize based on models of learning) and protocol (e.g., manage the session according to the appropriate stage and target of treatment). Linehan (1993a) identifies this task as being one of the most challenging for new therapists and one of the most important to the overall progress of therapy. The expert DBT therapists' session flows in a seemingly effortless manner as they discern targets accurately, move smoothly back and forth from validating the client to pushing for change, maintain balance stylistically and all the while, and are in skillful collaboration with the client.

9.8   Transition from Basic to Expert Status

Although adherence to the model is a primary goal for any DBT clinician, adherence does not guarantee competency or expertise. Competent DBT comes with formal training and supervised practice, expert status with time, continued practice and ongoing consultation. There are three important avenues that move a DBT neophyte to competence and onward to expert: (1) formal training, (2) supervised practice, and (3) the consultation team.

◼ Table 9.2
Portland DBT program, PC: First-year training checklist

1. Sit in on group – full round covering all the skills
2. Sit in on at least two intakes followed by orientation sessions (conducted by two different therapists with one being a senior staff person)
3. Attend weekly team consultation meeting
4. Attend weekly one-to-one appointment with supervisor
5. Observe family and friends orientation workshop
6. Participate in current study groups offered at the program
7. Participate in monthly mindfulness consultation group offered at the program
8. Review all program paperwork and forms
9. Review the format and content of clinical charts
10. Watch "Getting Started" videotapes with MML (BTTG)
11. Watch "Assessing and Treating" videotapes with MML (BTTG)
12. Watch client videotapes on "Crisis Survival Strategies," "Opposite-to-Emotion Action," and "Radical Acceptance" (BTTG)
13. Attend any outside DBT trainings recommended by the supervisor (BTTG)
14. Attend in-service trainings and workshops offered by the program
15. Attend intensive or fundamentals training (BTTG)
16. Read DBT text and skills manual

9.8.1 Formal Training

It is important to expose oneself to as many formal training opportunities in DBT as possible. Coursework in DBT is now available in some graduate programs and online through independent training groups. Other training opportunities include attending formal workshops in DBT ranging from 2-day introductory sessions to 10-day intensive trainings. It is highly recommended that therapists striving to achieve expert status in DBT attend an intensive training followed by regular consultation with an expert in the field. Formal training can be accomplished in other ways such as participating in study groups where books are read and discussed and DVD training videos watched. We have created a DBT training checklist for new therapists to ensure they receive what we feel is an adequate dose of training their first year. (See ▸ Table 9.2 for an example of our agency's training list). You may also refer to *DBT in Clinical Practice: Applications Across Disorders and Agencies* (Dimeff & Koerner, 2007) for more ideas on how to provide basic training in DBT.

9.8.2 Supervised Practice

Direct experience practicing any new behavior is necessary to achieve mastery. While reading about DBT will provide a basic understanding of the treatment and guidance in how to

■ **Table 9.3**

Portland DBT program, PC: DBT supervisor interview questions

1. What is the extent and nature of their training in DBT?
2. Have they completed the 10-day intensive DBT training?
3. Have they been supervised by an expert in DBT? By whom and for how long?
4. How many clients have they treated using DBT?
5. Do they have experience in any DBT adaptations (to other problems, populations and settings)?
6. Are they part of a DBT team? Who else in on the team? How often do they meet?
7. What happens in each component of DBT? What are the goals/functions of individual therapy versus group versus phone consult?
8. How do they manage their DBT after-hour crises?
9. What is their familiarity with the research on DBT?

implement it, actual practicing is the sine qua non to providing the treatment competently. This, of course, assumes that practice is supervised and that supervisor feedback is incorporated. Supervisors are advised to monitor and evaluate their supervisees beyond "talking about treatment," for example through direct observation via sitting in on sessions, watching them through a one way mirror, and through observing videotaped sessions. We encourage that supervisors evaluate their supervisee's work for both adherence to protocols and for acting from overarching principles of dialectics, mindfulness, and models of learning. Finally, very similar to an individual session in DBT, supervision should be an active process emphasizing practice both inside the session (e.g., role-play) and out (e.g., homework). For a more extensive discussion regarding DBT supervision, see the chapter by Fruzzetti et al. (1997) in *The Handbook of Psychotherapy Supervision*.

In order to become an expert in DBT, it is essential to work with a supervisor who is an established expert himself or herself. This is no easy task as there are far more individuals seeking supervision from DBT experts than there are experts in the field. Nevertheless, it is necessary to be closely connected with a supervisor skilled in DBT and who is also grounded in the underlying theoretical principles on which the treatment is based. We have provided a list of interview questions to ask a potential DBT supervisor (see ❯ Table 9.3). Above all, be sure to check out the individual's credentials including DBT training references and/or certificates if available.

9.8.3   Consultation Team

As noted throughout this chapter, having a well-functioning consultation team is a critical factor in the ongoing development of a DBT therapist. In fact, it is a basic requirement of DBT that anyone conducting the treatment be part of a consultation team that meets regularly. Just as clients agree to abide by certain conditions of DBT (i.e., treatment agreements), the treatment team agrees to abide by a set of consultation team agreements (see ❯ Table 9.4). These agreements should be clearly communicated to the new team members before joining the group and reviewed by the team as a whole on a regular basis. Adhering

⬛ **Table 9.4**

DBT consultation team agreements (From Linehan & Dexter-Mazza, 2008)

1. *Dialectical Agreement*: We agree to accept a dialectical philosophy. There is no absolute truth. When caught between two conflicting opinions, we agree to look for the truth in both positions and to search for a synthesis by asking questions such as "What is being left out?"

2. *Consultation to the Client Agreement*: We agree that the primary goal of this group is to improve our own skills as DBT therapists, and not serve as a go-between for clients to each other. We agree to not treat clients or each other as fragile. We agree to treat other group members with the belief that others can speak on their own behalf

3. *Consistency Agreement*: Because change is a natural life occurrence, we agree to accept diversity and change as they would naturally come about. This means that we do not have to agree with each other's positions about how to respond to specific clients, nor do we have to tailor our own behavior to be consistent with everyone else's

4. *Observing Limits Agreement*: We agree to observe our own limits. As therapists and group members, we agree to not judge or criticize other members for having different limits from our own (e.g., too broad, too narrow, "just right")

5. *Phenomenological Empathy Agreement*: All things being equal, we agree to search for nonpejorative or phenomenologically empathic interpretations of our client's, our own, and other member's behavior. We agree to assume that we and our clients are trying our best and want to improve. We agree to strive to see the world through our client's eyes and through one another's eyes. We agree to practice a nonjudgmental stance with our clients and with one another

6. *Fallibility Agreement*: We agree ahead of time that we are each fallible and make mistakes. We agree that we have probably either done whatever problematic things we are being accurse of, or some part of it, so that we can let go of assuming a defensive stance to prove our virtue or competence. Because we are fallible, it is agreed that we will inevitably violate all of these agreements, and when this is done, we will rely on each other to point out the polarity and move to a synthesis

to these agreements creates an atmosphere of mutual respect and trust that is critical to learning to provide effective DBT.

The consultation team serves many functions but first and foremost it aims to improve the therapist's skill at providing DBT. The primary process by which therapists get better at doing DBT parallels clients using DBT to get themselves better, i.e., therapists practicing the treatment strategies and skills with, and on, each other. Thus, in addition to staffing client issues in the team meeting, therapists look for opportunities to apply the treatment "in vivo." For example, chain and solution analyses are regularly conducted on team members who are consistently late or not prepared for meetings. Another common scenario involves one team member experiencing increasing anger and frustration at another because their fellow team member "should know better" or "be doing things differently" than they are. This situation provides a rich opportunity for the "accuser" (i.e., frustrated team member) to practice radical acceptance and taking a nonjudgmental approach to assessing the problem with the "perpetrator" (i.e., problematic team member). Finally, in our experience, therapists (being the greatest conflict avoiders/people pleasers of them all) are notorious for fragilizing each other due to fear of anger, being disliked, or having others think poorly of them. The use of exposure to "approach not avoid" the feared stimuli or situation is warranted in order to achieve the end goal of improved skill in providing DBT.

9.9   Summary

DBT is a ground-breaking treatment shown to be effective in the treatment of BPD, a disorder that for many years was thought untreatable. Providing DBT treatment to individuals diagnosed with BPD is a complex and challenging process. It is our experience that there is a steep learning curve in understanding and delivering the treatment. There are many things to keep in mind and to balance when conducting DBT. In addition, the population for which DBT is designed further complicates factors. There is a high rate of burnout associated with working with individuals diagnosed with BPD because of their extreme emotional and behavioral dysregulation, including rage outbursts and suicidal behaviors. As a result, mastering DBT is a challenging process.

Very little is written about how to become a DBT clinician. The questions of "What differentiates a beginning-level DBT clinician from an expert DBT clinician?" and "How does someone become an expert?" have not been formally answered. This chapter is the first to address such questions. The answers included in this chapter, however, remain merely a hypothesis. At this point, from a research perspective, we do not know exactly who or what qualifies as an expert DBT clinician. Formalizing such information will hopefully lead to increased fidelity and adherence by clinicians to the DBT model and thereby result in more effective services for our clients.

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10 Substance Use Disorders

David J. Kavanagh · Jason Connor · Ross Young

Abstract: Basic competencies in assessing and treating substance use disorders should be core to the training of any clinical psychologist, because of the high frequency of risky or problematic substance use in the community, and its high co-occurrence with other problems. Skills in establishing trust and a therapeutic alliance are particularly important in addiction, given the stigma and potential for legal sanctions that surround it. The knowledge and skills of all clinical practitioners should be sufficient to allow valid screening and diagnosis of substance use disorders, accurate estimation of consumption and a basic functional analysis. Practitioners should also be able to undertake brief interventions including motivational interviews, and appropriately apply generic interventions such as problem solving or goal setting to addiction. Furthermore, clinical psychologists should have an understanding of the nature, evidence base and indications for biochemical assays, pharmacotherapies and other medical treatments, and ways these can be integrated with psychological practice.

Specialists in addiction should have more sophisticated competencies in each of these areas. They need to have a detailed understating of current addiction theories and basic and applied research, be able to undertake and report on a detailed psychological assessment, and display expert competence in addiction treatment. These skills should include an ability to assess and manage complex or co-occurring problems, to adapt interventions to the needs of different groups, and to assist people who have not responded to basic treatments. They should also be able to provide consultation to others, undertake evaluations of their practice, and monitor and evaluate emerging research data in the field.

10.1 Overview

Substance use disorders (SUDs) are common, with an incidence in the general population of around 9% (excluding tobacco) – a rate similar to mood and anxiety disorders (Grant et al., 2004). Furthermore, they often have a severe impact on physical health, psychological status, and social functioning (e.g., Bush, Autry, Bush, & Autry, 2002). Together, these features highlight the importance of effective prevention and treatment responses. Clinical psychologists have contributed significantly to the development, evaluation, and implementation of interventions in this field, and assurance of their competencies has substantial potential impact on service quality.

While all psychological disorders require a multidisciplinary approach if they are to be fully understood, this is especially true for SUDs. The fact that these disorders involve ingestion of psychoactive agents requires that practitioners have a basic understanding of relevant information derived from pharmacology, neurophysiology, genetics, and general medicine. This knowledge becomes especially important for expert practitioners.

However, the need for multidisciplinary knowledge should not overshadow the importance of knowledge and skills acquired from the mainstream discipline of clinical psychology.

Despite recent developments in the basic science and pharmacotherapy of addiction, assessments and frontline treatments for substances of abuse retain strong influences from psychological theory and research. In many cases, interventions have been adapted from other problem areas (e.g., anxiety, social skills). In others, specific interventions have grown within SUDs (e.g., motivational interviewing, relapse prevention), some of which are now applied in the treatment of other disorders. This chapter discusses the evidence base for psychological responses to substance misuse and the nature of related competencies and describes key areas from other disciplines as well.

10.1.1 Key Concepts

Psychoactive substances alter the functioning of the central nervous system, so the users experience temporary changes in consciousness (including emotions, perceptions, and other cognitions). They are broadly categorized into *depressants*, *stimulants*, and *hallucinogens*. Intoxication with depressants results in acute suppression of neural activation, and depending on the neural systems involved, it is typically experienced as sedating. Depressants do not necessarily trigger or worsen a depressed mood, although some may do so (e.g., dysphoria subsequent to an episode of alcohol use). Stimulants trigger neural excitation, while perceptual changes are the key hallmark of hallucinogens. These categories should be seen as shorthand descriptions that are to some extent, simplifications. For example, some substances do not easily fit into this rubric. Cannabis has subjective effects across all three categories (Green, Kavanagh, & Young, 2003), and some effects of cocaine (typically categorized as a stimulant) involve inhibition of neural transmission (Frishman, Del Vecchio, Sanal, & Ismail, 2003). Substances often have contrasting effects over time, setting, and dosage (e.g., initial increases in pulse and blood pressure at low doses of alcohol, but reductions at higher doses).

While levels of *intoxication* generally increase with dosage, individuals show differential sensitivity to effects, and effects of a given dose may change over time, depending on their physiological state and history of use. Psychoactive substances can be seen as poisons, since overdoses can have deleterious effects (e.g., sedatives suppress respiration or heartbeat and stimulants can increase heart rate and blood pressure to the point where cardiac fibrillation or brain hemorrhage may occur). *Metabolism* of the substance protects the body to same extent from toxic accumulation, although this protection is limited by enzyme kinetics. Some metabolites can also have aversive and potentially dangerous effects. An example is acetaldehyde, the initial metabolite of alcohol (Jelski & Szmitkowski, 2008), which can produce symptoms of nausea and sympathetic nervous system arousal.

Withdrawal refers to effects of stopping or substantially reducing consumption. In general, withdrawal effects approximate the opposite of intoxication (e.g., sedation/excitation), although the full story is more complex. Repeated use triggers structural and functional neural changes: some involve *sensitization* to the presence of the substance (e.g., increased motivational salience; Robinson & Berridge, 1993); others comprise neural adaptation. The latter effects are experienced as increased *tolerance* when more of the drug is needed to have the same effect. Over time, adaptational responses become faster and stronger, and pleasure from intoxication becomes less intense and shorter in duration (Koob & Le Moal, 2008; Solomon, 1980). Use

becomes more strongly associated with relief of withdrawal ("needing") rather than hedonic "wanting" (Robinson & Berridge). Increased incentive salience and tolerance are important contributors to progressive increases in consumption that are commonly seen with psychoactive substance use, and the progressive neural adaptation underpins development of a full *withdrawal syndrome* after a history of heavy use. There is a significant classical conditioning effect, with withdrawal being more pronounced in the presence of environmental cues associated with drug administration.

Substances with a high potential for misuse have extremely pleasurable net effects of intoxication or are particularly prone to tolerance and an aversive impact from cessation. Route of administration is an important contributor to rate of uptake and distribution through the body, with injection and inhalation typically resulting in a steeper trajectory of effects than gastrointestinal use.

The rate of metabolism is also important. Substances which are rapidly metabolized into inactive metabolites and are rapidly excreted (e.g., nicotine) are associated with frequent consumption, not only because more frequent use is required to maintain the acute substance effects, but also because the salience and aversive nature of a rapidly developing withdrawal is a powerful trigger for immediate use. On the other hand, substances with a longer half life (e.g., methadone and some benzodiazepines) produce challenges for the ongoing maintenance of abstinence in the presence of a withdrawal that may extend over several weeks.

10.2   Developmental Symptoms and Their Assessment

10.2.1 Problem Features

For many people, some substance use (e.g., caffeine or alcohol) is pleasurable and nonproblematic. For others, substance use can have a severe impact on health, quality of life, and economic and social functioning (Connor, Saunders, & Feeney, 2006). *High-risk use* refers to consumption that conveys a significant risk of later problems. Some substances (e.g., cigarette smoking) have no level of consumption that is physically "safe." In other cases (e.g., alcohol), there may be benefits of low-level use, so that net health effects may be positive (Li, 2008; cf. Fillmore, Kerr, Stock-well, & Bostrom, 2006). Recommended maximum limits for alcohol vary across countries and over time: the current level in the USA is less than or equal to two drinks (28 g ethanol) a day for men and less than or equal to one drink (14 g ethanol) a day for women (United States Department of Agriculture and United States Department of Health and Human Services, 2005).

Two key substance-related disorders in the *Diagnostic and Statistical Manual of Mental Disorders*, *4th Edition* (DSM-IV) (American Psychiatric Association, 1994) are *abuse* and *dependence*. Substance abuse refers to repeated substance use, despite impairments in functioning across important interpersonal, social, and occupational domains, or recurrent use in situations that are physically hazardous. It is positioned in the context of social norms and culture. For this reason, it does not appear in *International Classification of Diseases – 10th Revision* (ICD-10) (World Health Organization, 2004), which, instead, has a diagnosis of *harmful use* (i.e., a pattern of use that is producing mental or physical harm).

Substance dependence additionally involves a pervasive, chronic cluster of psychological, behavioral, and physiological drives that maintain the condition typically associated with excessive administration. The current conceptualization of dependence relies extensively on the seminal description of the alcohol dependence syndrome by Edwards and Gross (1976). The features include withdrawal (or use to avoid it), tolerance, inability to control use (i.e., often used more than intended or over a longer period; a persistent desire or unsuccessful attempts to stop or reduce), high priority for use (i.e., substantial time obtaining, using, or recovering; other important activities stopped or reduced), and continued use despite physical or psychological harm (a feature similar to ICD-10 Harmful Use). DSM-IV requires three of the seven features to be present in a 12-month period and the presence of clinically significant impairment or distress.

While abuse was thought to be a milder form of substance use problem in DSM-IV (Feingold & Rounsaville, 1995), more recent research has cast doubt on whether most abuse criteria involve milder symptoms (Li, 2008). Substance-related problems are better described along a continuum of severity (Gillespie, Neale, Prescott, Aggen, & Kendler, 2007; Kahler & Strong, 2006), with particular features occurring at different levels of frequency of use or severity of dependence in different substances (Gillespie et al., 2007).

Key clinical psychology competencies in the addictions field should not only encompass the basic concepts summarized above, but reflect the emerging sophistication in our understanding of substance-related disorders and the potential for significant changes in diagnostic criteria over time. In the remainder of this chapter, we use the term *substance use disorder* (SUD) to embrace abuse, harmful use or dependence, and *substance misuse,* to include both SUDs and high-risk use.

Substance misuse contributes disproportionately to human morbidity and mortality, with the high prevalence and risks from tobacco and alcohol use offering a particularly heavy burden (World Health Organization, 2008). The impact of a specific substance on an individual is augmented by heightened risks of co-occurring substance misuse (Substance Abuse and Mental Health Services Administration, 2008) and other mental disorders. Approximately half of the people with an alcohol use disorder and three quarters with another drug use disorder also meet criteria for at least one other mental disorder (Kessler, McGonagle, Zhao, & Nelson, 1994). Because of their high population prevalence, depression and anxiety disorders are the most commonly co-occurring mental disorders, even though the greatest relative risk occurs in bipolar disorder and schizophrenia (Regier et al., 1990). So, one in four people with alcohol dependence carry a lifetime history of mood disorder and one in three have had an anxiety disorder (Merikangas et al., 1998). High rates of comorbidity mean that competencies for practice in SUDs should not be seen in isolation: a competent practitioner in this field should also have competence in assessment and treatment of other mental disorders and should be able to tailor assessment and treatment for people with co-occurring substance misuse (Kavanagh & Connolly, 2009a, b).

10.2.2 Assessment

Assessment should always be integrated into the therapeutic process, and this is especially important in addictive disorders. Rather than being an information-gathering exercise, assessment provides valuable lead into brief opportunistic interventions that develop awareness

and build motivation. As discussed further below, there is strong evidence supporting the efficacy of brief interventions delivered in this manner.

10.2.2.1 Establishment of Trust

Substance use problems often attract negative social responses, and the use of many substances is illegal. It is therefore not surprising that many substance users reject labels they perceive as value-laden (e.g., "alcoholic") and minimize substance-related problems, particularly when reporting them to others. Use and abstinence of specific substances can be confirmed by biochemical assays, but self-report remains the only practical way to obtain the level of detailed information that allows development of a detailed functional analysis. Before someone is willing to freely discuss their substance use and its effects, they must be assured that disclosure will not have negative consequences. Development of a nonjudgmental and warm relationship and clarity about confidentiality and use of information are particularly important when trust is initially low.

10.2.2.2 Assessment of Consumption

Intoxication and cognitive impairment can make it difficult for users to encode and recall substance use, but inaccuracy in consumption can also arise from the way in which questions are asked. Such inaccuracy may be interpreted as a consequence of "alcoholic denial," but there is little evidence to support this. Omitting questions about specific substance groups is a frequent cause of underreporting, and reports of "usual" consumption are prone to recall biases and error, particularly if there are substantial variations in usage over time. If there are stable weekly or monthly patterns, accuracy can be increased by asking about specific substances that are used each day of the week or month, and further improvements can be made by triangulation from multiple estimates (recent frequency and typical amount; weekly purchases, cost). Tracking usage often requires detailed knowledge of quantities that are actually used (e.g., drink sizes): this may entail both education and home tasks.

Use of event-cued recall of consumption on a calendar-based Timeline Followback (Sobell & Sobell, 1993) can provide detailed information about consumption over the previous 1–3 months. If the person is highly motivated, daily self-monitoring may be used over short periods. Cues and time-stamped records can be offered by using e-mails, electronic diaries, or mobile telephones, and errors due to intoxication may be reduced by tracking products (e.g., number of bottles, amount of the substance or money remaining). Self-monitoring may underestimate usual consumption by cueing self-control. While potentially problematic for assessment, this feature may be used to assist early stages of treatment (Kavanagh, Sitharthan, Spilsbury, & Vignaendra, 1999).

Where an underestimated consumption is suspected, a "bogus pipeline" effect may be used (Roese & Jamieson, 1993), where the person is informed that confirmatory evidence, such as physiological measures, can be used to check reports. While this strategy may be unavoidable when there are contingencies for reduction or abstinence, care is needed to maintain trust and rapport when it is used. It also raises broader ethical issues, and collateral reports may be used as a more pragmatic and honest means to validate self-reports. However, collateral reports also

raise ethical and pragmatic problems. Substance use may be hidden from others, and collaterals are subject to the same recall errors and biases as the client.

It is tempting to see biochemical analyses as the gold standard, although considerations of cost, limited sensitivity to small amounts or longer periods, and ambiguity of interpretation can be issues. For example, breath analyses for smoking or alcohol have practical application only to consumption over the previous few hours. Plasma thiocyanate can detect smoking over the previous 14 days, but is relatively insensitive to light smoking (Pre & Vassy, 1992). Current biomarkers of heavy alcohol use vary in sensitivity and specificity, and some are also inflated by other conditions, but a combination of markers increases accuracy (Miller & Anton, 2004). In general, assays have greater utility for outpatient assessment where the focus is on detection of abstinence versus use (rather than changes in quantity and frequency), and where the substance or a metabolite is present for a longer period (e.g., cannabis; Musshoff & Madea, 2006), or where it is captured (e.g., in hair). However, even when all of these are present, sensitivity can still sometimes be an issue (e.g., plasma provides greater sensitivity to cannabis use than hair; Musshoff & Madea). A general clinical psychologist may be expected to understand basic assays and reports (e.g., blood alcohol level, carbon monoxide, substances detected by a laboratory), but a specialist in alcohol and other drugs should be able to administer a breath test and be aware of limitations of other specific biochemical assays.

10.2.2.3 Functional Analysis

A functional analysis of substance misuse has the same elements as other problems (Wilson, Spence, & Kavanagh, 1989; chapter 9), embracing both deficits and strengths (e.g., periods of abstinence or moderation; effective coping, unaffected aspects of the person's life), examining historical and current antecedents and consequences or incentives, and covering cognitive, affective, behavioral, physiological, and social domains. Since ambivalence about consumption or engagement in treatment is often present, careful analysis of positive and negative incentives for current use and behavior change (and the accuracy of these expectancies) is particularly important.

10.2.2.4 Psychometric Measures

There are many robust psychometric instruments for screening and assessment of SUDs. It is beyond the scope of this chapter to review each of these measures. Sound summaries are provided by Dawe, Loxton, Hides, Kavanagh, and Mattick (2002) and Allen and Wilson (2003).

10.3   Maintenance Factors of Substance Misuse

While psychological, biological, cultural, and social factors contribute to the development of problematic use, there is no simple explanation for some becoming dependent, while others do not. The predominant theories for etiology of problem drinking up to the early 1960s were grounded in a disease model. On the basis of anthropological (MacAndrew & Edgerton, 1969)

and experimental (Marlatt & Rohsenow, 1980) studies, the idea that problematic substance use and anticipated effects of substances draw heavily on learned behavior has gained acceptance. While the genesis of substance use problems clearly involves genetic risk (Wong, Schumann, Wong, & Schumann, 2008), this needs to be complemented with a broader understanding of the psychological and socio-cultural processes involved in problem drinking.

In common with other problem domains, social-cognitive theory (Bandura, 1982) continues to make a significant impact on our understanding of the initiation and maintenance of addictive disorders. Bandura (1997) identified two types of expectations that have particular relevance to addictions: outcome and self-efficacy expectancies. Positive outcome expectancies of substance use develop from an early age, often vicariously, and are associated with increased risk of substance-related problems (Goldman, 1987; Young & Oei, 1993). Low self-efficacy expectancies for control of substance use are associated with increased substance use (Skutle, 1999) and relapse following treatment (Maisto, Connors, & Zywiak, 2000). Outcome and self-efficacy beliefs are typically more powerful predictors together than individually (Baldwin, Oei, & Young, 1993; Bandura, 1999).

Other psychological theories that have informed our conceptualization of substance misuse include Social Control Theory (based on family and affiliative group beliefs and supervision), Behavioral Choice Theory (based on the relative access to drug and nondrug rewards), and Stress and Coping Theory (where coping skills to face challenges without substance use are suboptimal or absent; Moos, 2008).

Identified risk factors for substance misuse support the premises of all four theories. These include: (1) social environmental adversity, such as high crime, alienation, and high population density, (2) family pathology such as parental substance misuse, family disruption, poor attachment and low parental monitoring, and (3) peer influence, such as a heavy or precocious peer substance use and delinquency and individual risks, including the presence of childhood traumatic events, conduct disorder symptoms, impulsivity, low self-esteem and mood or anxiety disorder. Risk factors are comprehensively reviewed in Armstrong and Costello (2002) and Weinberg, Rahdert, Colliver, and Glantz (1998).

10.4 Evidence-Based Treatment Approaches

There is substantial evidence on effectiveness of interventions for alcohol (Miller & Wilbourne, 2002) and tobacco use (The Clinical Practice Guideline Treating Tobacco Use and Dependence Update Panel Liaisons and Staff, 2008). Evidence to support intervention choices for many other substances is less advanced. For example, psychological intervention for benzodiazepine dependence provides incremental improvements in outcomes above gradual dose reduction alone, but there is insufficient evidence to identify effective treatment components (Parr, Kavanagh, Cahill, Mitchell, & Young, 2009).

10.4.1 Motivational and Brief Interventions

Motivational interviewing (MI) was developed by Miller (1983) for treatment of problem drinkers and further refined by Miller and Rollnick (1991) and Rollnick and Miller (1995). MI has been defined as "a client centered, directive method for enhancing intrinsic motivation to

change by exploring and resolving ambivalence" (Miller & Rollnick, 2002). Ambivalence is a common feature of clients considering making a change to problematic substance use. Key goals of MI are to avoid labeling, support self-efficacy, recognize and accept ambivalence as normal, and encourage the client's own reflection and dialog for change.

Several reviews and meta-analyses support the efficacy of MI in the treatment of most SUDs (e.g., Kaner et al., 2007; Rubak, Sandback, Lauritzen, & Christensen, 2005; Vasilaki, Hosier, & Cox, 2006), although studies on nicotine dependence show high heterogeneity and low effect sizes (Burke, Arkowitz, & Menchola, 2003; Dunn, Deroo, & Rivara, 2001). Confrontation, which is antithetical to MI, is an ineffective treatment (Miller & Wilbourne, 2002).

In the Miller and Wilbourne (2002) meta-analytic review of 361 controlled alcohol treatment trials, MI and other brief interventions had greater cumulative support than a wide range of other psychological and pharmacological treatments. Two landmark trials have compared a multi-session version of MI, motivation enhancement therapy (MET), with comparison treatments (Project MATCH Research Group, 1998; UKATT Research Team, 2005). These trials demonstrated that MET had equivalent efficacy to Cognitive-Behavioral Therapy (CBT), Twelve-Step Facilitation (TSF; Project MATCH Research Group), and Social Behavior and Network Therapy, a CBT-based treatment (UKATT Research Team, 2005, 2008), and that it achieved this benefit in substantially fewer sessions. Consistent with the model underpinning MI, outpatients who commenced at lower levels of baseline motivation and reported higher anger levels had better outcomes from MET in Project MATCH, although the former effect was restricted to the first year of follow-up (Project MATCH Research Group, 1997, 1998).

10.4.2 Twelve-Step Facilitation (TSF)

The most widely recognized TSF approach is Alcoholics Anonymous (AA). It involves self-help groups that offer ongoing mutual peer support, and promote an abstinence goal (Anonymous, 2007; Vaillant, 2005). While health practitioners do not participate in AA activities, both approaches may co-occur. Central to TSF is that participants accept that they are powerless over their substance use. Other steps involve taking greater responsibility, including restitution for past harm to others, while letting go of inner struggle. Although the core theme is to surrender to a higher power to assist with change, TSF does not support any specific religion. Other features in some countries include use of a buddy system (a "sponsor") to provide support between group meetings.

There are significant methodological challenges in assessing the efficacy of AA, since most groups do not register participants, attendance, or outcomes. Few controlled studies of self-help groups exist (Kelly, 2003), and almost exclusively these examine alcohol dependence. While there is support for the hypothesis that more AA attendance is associated with better outcomes (Emrick, 2001), this result confounds commitment to change with group exposure. While two meta-analytic studies found little support for AA in treatment of alcohol use disorders (Ferri, Amato, & Davoli, 2006; Kownacki & Shadish, 1999), trials often lack a placebo, no-treatment, or wait-list control.

To provide more rigorous tests of the relative efficacy of TSF, some studies have used an intervention that applies a TSF philosophy, without actually being an AA group. Outcomes of such trials are mixed at best (Miller & Wilbourne, 2002). Identification of patient characteristics associated with a greater impact from TSF has also had little success. In Project MATCH,

participants with a social network of heavy drinkers did better from TSF than MI, but only at the 3-year follow-up (Project MATCH Research Group, 1997, 1998).

10.4.3 Cognitive-Behavioral Therapies (CBTs)

In SUDs, cognitive therapy (Beck, 1993) is particularly applied to excessively positive substance expectancies, low self-efficacy and negative beliefs about abstinence, as well as to depressogenic or anxiety-related cognitions that may trigger dysfunctional substance use. Other common elements in CBTs for substance misuse include development of skills in predicting high-risk situations for substance use, and applying problem solving and response planning. Skills in refusing social pressure to use substances and stress management may be developed, and there is often a focus on increasing pleasurable activities and social roles that are inconsistent with substance use.

Efficacy of CBT for alcohol dependence is well established (e.g., Assanangkornchai & Srisurapanont, 2007; Berglund et al., 2003), although it appears to have similar impact to several other "active" treatments. As already discussed, Project MATCH found similar treatment outcomes between CBT, MI, and TSF (Project MATCH Research Group, 1997, 1998). The efficacy of CBT for cannabis (Denis, Lavie, Fatseas, & Auriacombe, 2006), cocaine (Knapp, Soares, Farrell, & Silva de Lima, 2007), and amphetamine misuse (Denis et al., 2006; Knapp et al., 2007; Lee & Rawson, 2008) is also receiving growing support.

10.4.4 Behavioral Therapies Based on Operant or Classical Conditioning

While behavioral approaches based on operant or classical conditioning are often employed within multicomponent CBTs, their effects can also be considered separately. The most widely studied behavioral therapies are cue exposure and contingency management.

Cue Exposure. Repeated pairing of substance use with both positive effects and environmental cues elicits conditioned responses that increase the probability of use. Cravings (or urges to use substances) are often elicited by exposure to conditioned stimuli (Carter & Tiffany, 1999). Repeated exposure to conditioned stimuli can induce habituation of craving (e.g., Kavanagh et al., 2006). Exposure to cues may be combined with cognitive therapy or skills training in resisting substance use (Monti et al., 1993), an approach that blurs distinctions between habituation-based treatment and other CBTs.

Most controlled trials have focused on alcohol. Cue exposure (CE) is typically more effective than control conditions such as relaxation training (Drummond & Glautier, 1994), but has similar efficacy to CBT (Dawe, Rees, Mattick, Sitharthan, & Heather, 2002; cf. Sitharthan, Sitharthan, Hough, & Kavanagh, 1997), and its addition to CBT may not add to efficacy (Kavanagh et al., 2006).

Contingency Management (CM). CM introduces a tangible reinforcer (e.g., money or vouchers for inpatient privileges) to increase desired behaviors such as session attendance or abstinence. Adding CM to treatment of cocaine abuse has had promising results (Stitzer & Petry, 2006), and there is a growing support with cannabis and amphetamine dependence (Carroll et al., 2006; Denis et al., 2006; Lee & Rawson, 2008).

Provision of external reinforcement creates a vulnerability to extinction of the behavior once reinforcers are withdrawn. This may be particularly problematic when there is intrinsic

motivation to participate in treatment and control consumption, since the person may reattribute their behavior to the external reinforcer (Deci, Koestner, & Ryan, 1999). If external reinforcers are used, they should be presented as an adjunct to other incentives rather than a replacement, and the primary emphasis (particularly in latter treatment sessions) needs to be on internal motivation and naturalistic rewards that are likely to continue after formal treatment ceases. Aversive therapies were popular in the 1960s and 1970s, but for ethical reasons, they are no longer in common use.

10.4.5 Couples and Family Therapy

In the past, substance misuse has often been treated as an individual problem. Recognizing social factors in substance misuse and recovery has resulted in a greater emphasis on inclusion of family members in interventions. Couples and family therapies have been found to be effective in treatment of both alcohol (O'Farrell & Fals-Stewart, 2002) and other substance misuse (Powers, Vedel, & Emmelkamp, 2008).

10.4.6 Community Reinforcement Therapy (CRT)

Although originally conceptualized as an operant approach, CRT incorporates many elements from CBTs and other case-management interventions (Azrin, 1976; Hunt & Azrin, 1973), including referral to other professionals (e.g., for legal or financial issues), TSF, pharmacotherapy, behavioral marital therapy, and development of social roles (e.g., employment) and recreational activities that are inconsistent with substance use. Later versions incorporate written contracts, tracking of high-risk situations, rehearsal of skills in resisting substance use, peer support, and sometimes CM (Secades-Villa, Garcia-Rodriguez, Higgins, Fernandez-Hermida, & Carballo, 2008). CRT has empirical support across several substances, although numbers of trials remain limited (Roozen et al., 2004; Smith, Meyers, & Miller, 2001).

One version of CRT, Community Reinforcement and Family Training (CRAFT; Meyers, Miller, Hill, & Tonigan, 1998), attempts to induce behavioral change in people who refuse treatment, by encouraging concerned family members or friends to reward instances of substance control or treatment, and withdraw reinforcement for substance misuse. While there are few trials of CRAFT, available evidence is supportive, and suggests that systematic reinforcement produces superior results to Al-Anon, which are AA-related groups for family members, with some similar aims and strategies to CRAFT (Smith et al., 2001).

10.4.7 Pharmacological Approaches

For alcohol, heroin, and nicotine dependence in particular, there are strong data to support a combined pharmacological and psychological treatment. Support for pharmacotherapy of cannabis, stimulant, and hallucinogen misuse is more limited.

Alcohol. The pharmacotherapy for alcohol dependence that has the longest history is disulfiram or antabuse, which stops the metabolism of acetaldehyde, producing sympathetic nervous system activation, nausea, vomiting, and headaches. The knowledge that this aversive

response will occur after ingestion of alcohol can assist users to maintain total abstinence. While there is some evidence that consistent, supervised use of disulfiram can improve alcohol outcomes (Fuller & Gordis, 2004; Hardt, 1992), poor adherence (Fuller & Gordis) means that it has little demonstrated effectiveness (Helig & Egli, 2006). In addition, potential physical complications from disulfiram (e.g., to a compromised cardiovascular system) have restricted its utility (Chick, 1999; Malcolm, Olive, & Lechner, 2008), and a medical assessment is required before its prescription.

More recently, naltrexone and acamprosate have been used. There is evidence of efficacy for both medications, and in particular, each may add to the effects of psychological treatment (Bouza, 2004; Feeney, Connor, Young, Tucker, & McPherson, 2006; Kranzler, 2001). Clients with severe alcohol dependence, high current consumption, a history of unsuccessful treatment and significant craving may particularly benefit from adjunctive pharmacotherapy. While often characterized as an anticraving medication, naltrexone may have its main impact on craving by reducing rewards from drinking, rather than affecting craving more directly. Consistent with this, its differential benefits are more typically seen with occasions of heavy drinking than abstinence (Pettinati et al., 2006). Both agents may also allow an indirect effect via the opportunity to benefit more from psychosocial interventions.

Nicotine. Nicotine replacement therapy doubles the chances of successfully quitting (Stead, Perera, Bullen, Mant, & Lancaster, 2008), as does bupropion (an antidepressant; Hughes, 2007). A new agent, varenicline triples the chances of quitting, compared with placebo (Cahill, 2008). Best practice for nicotine dependence currently includes one of these pharmacotherapies.

Opiates. Methadone (an opiate agonist) remains the frontline replacement therapy for opiate dependence. Typically treatment involves daily oral doses. Methadone retains the clients in treatment longer, improves functional outcomes, and reduces opiate use compared with control treatments (Mattick, Breen, Kimber, Davoli, & Breen, 2003). Buprenorphine (a partial opiate agonist) offers an alternative to methadone with similar efficacy (Mattick et al., 2003). Advantages over methadone include lower potential for abuse and reduced physical dependence. Naltrexone (an opiate antagonist) has been relatively ineffective in treating opiate dependence, primarily due to poor treatment retention (Minozzi et al., 2006). There is some empirical support for stand-alone psychological interventions for opiate dependence (Mayet, Farrell, Ferri, Amato, & Davoli, 2004), and evidence that psychological and pharmacological treatments are synergistic (Stein et al., 2004).

10.4.8 Preventive Intervention

Community-based universal prevention approaches that increase purchase cost and legal age of access to (licit) substances have been among the more effective strategies to reduce substance-related harm, particularly in young people (Stockwell, Gruenewald, Toumbourou, & Loxley, 2005). Media and social marketing campaigns have been successful in reducing tobacco use at a population level (Bala & Lesniak, 2007), but there is less evidence for other substances. The most widely studied universal prevention programs are school-based interventions. Many programs show improvements in substance use in the short term (<12 months), but data on long-term maintenance of improvements are weak (Foxcroft, Ireland, Lowe, & Breen, 2002; White & Pitts, 1998), unless the intervention has a broad skills base and is delivered over several years. Screening "at risk" populations and providing brief, opportunistic treatment does appear

to reduce consumption and decrease numbers progressing to problematic substance use (Babor & Kadden, 2005; Kaner et al., 2007). Key aspects of successful programs appear to be engagement in prosocial goals and activities, rather than education about substances and their effects.

10.5   Mechanisms of Change Underlying the Intervention

Historically, substance misuse treatment research has been more focused on "what works" than on "why it works." Identifying the mechanisms responsible for effectiveness is a tall order (Kazdin, 2006), and meeting those criteria has remained elusive in virtually all psychotherapies, including those for addictions (Longabaugh, 2007). Despite the lack of advancement of our knowledge to date, potential contributors to effects of addiction treatments have been identified. Attendance and participation in AA or other treatments frequently emerge as a predictor (Forys, McKellar, & Moos, 2007) but as noted above, they are confounded with motivation.

10.5.1 Potential Client–Therapist Mechanisms

Stage of Change. While it is not an explanatory theory, the Stages of Change (or Transtheoretical) model of Prochaska and DiClemente (1983) has been an influential summary of client preparedness in SUD treatment. There is some evidence that participants with lower motivation to change respond more effectively to MI, although the meditational effect of readiness to change has received only inconsistent support (Morgenstern & McKay, 2007).

   Therapeutic Alliance. The UKATT trial (UKATT Research Team, 2005) identified therapist–client alliance as the strongest predictor of outcome. Patients who perceive therapists as less understanding are more likely to drop out of therapy for substance misuse (Cournoyer, Brochu, Landry, & Bergeron, 2007). However, therapeutic alliance has not consistently been predictive of outcome (Long, Williams, Midgley, & Hollin, 2000).

10.5.2 Potential Social or Contextual Mechanisms

Relationship Functioning. There is evidence of marital satisfaction increasing after behavioral couple therapy for alcohol misuse, and for better alcohol outcomes after improvements in marital interaction, but as yet there is no full test of mediation (Morgenstern & McKay, 2007).

   Group Membership. It is difficult to untangle effects of AA, but commitment to AA practices is positively associated with outcome (Longabaugh et al., 2005). Social network support for abstinence has been proposed as a critical contributor to positive outcomes from AA (Longabaugh, Wirtz, Zweben, & Stout, 1998) and social support may be important across treatments, particularly for males (Moos, 2007).

10.5.3 Potential Psychological Mechanisms

Learning. While there is intuitive appeal that therapy involves learning (e.g., of new skills), there are little data on its potential mediational role. Morgenstern and Longabaugh (2000)

could find no evidence of skills mediation in CBT. When coping skills have been associated with outcome, changes in those skills have not been specific to CBT (Morgenstern & McKay, 2007). Approach-related coping is generally associated with better outcomes than avoidance coping (Moos, 2007), but both can be effective (Litt, Kadden, Cooney, & Kabela, 2003; Maisto et al., 2000). Most research on meditational effects of coping skills has examined effects of perceived coping, rather than directly observing behaviors (e.g., Litt et al., 2003). Indirect evidence that skills practice is important is provided by observations that homework completion is related to better outcomes from CBT (Carroll, Nich, & Ball, 2005), although these require replication, and as with session attendance, this factor confounds with motivation. Reinforcement expectancies have also shown promise as predictors of outcome, but further tests of their role as a treatment mechanism remain to be undertaken (Young & Oei, 1993).

Self-Efficacy. Prospective treatment-based studies have predominately examined situational confidence in the form of self-efficacy beliefs. Self-efficacy predicts relapse to heavy drinking for up to 2 years (Kavanagh, Sitharthan, & Sayer, 1996; Walton, Blow, Bingham, & Chermack, 2003). When both alcohol expectancy and self-efficacy are examined together, self-efficacy beliefs are typically stronger predictors of alcohol consumption post treatment than alcohol expectancy (Solomon & Annis, 1990). However, some studies have failed to find evidence of a predictive role of self-efficacy (McKay, Maisto, & O'Farrell, 1993; McKellar, Harris, & Moos, 2006). An incremental contribution from self-efficacy above performance achievements is most often seen in contexts where the person has information about future challenges to their coping skills, which enables them to predict their behavior control (Bandura, 1982). If they have little experience in controlling substance use, respondents may not yet know which situations will be most difficult, and if there is little change in situational challenge over time, there is less opportunity for self-efficacy to improve on predictions from past performance.

Self-efficacy is a summative subjective estimate of coping potential, and questions can also be raised about factors that maximize it. McKellar, Ilgen, Moos and Moos (2008) found the best predictor of self-efficacy to be AA attendance in the 12 months following treatment, with lesser contributions from diminished depression, avoidance coping, and social support.

10.5.4 Potential Macro- and Microenvironmental Mechanisms

Availability of Contingent Reinforcement. Alternative, nonsubstance related sources of reinforcement predict more positive outcomes (Moos, 2007), and many people with substance use problems live in environments with relatively impoverished availability and variety of reinforcers. As discussed above, both CM and CRT systematically manipulate access to a range of reinforcers, contingent on abstinence and other functional behaviors (Petry et al., 2005). Development of social roles such as employment or relationships with nonusers results in complex and sustainable "natural" reinforcers being put in place (along with other potential benefits, such as reduced exposure to temptation and acquisition of control skills).

Craving. In CE, repeated exposure to interoceptive and exteroceptive cues without ingesting the substance allows habituation of craving, in part because of the absence of pairing with pleasure or relief that is associated with substance use. As already noted, it can also be seen within an operant or skills-training paradigm, in which resistance of substance use is socially reinforced. Limitations to effectiveness of CE may in part stem from limited generalizability from clinical to natural settings, and the fact that any effective treatment involves repeated

trials of resisting substance use in the natural environment (Kavanagh et al., 2006). Modification of cognitive responses such as craving may further improve effects of exposure (Kavanagh, Andrade, & May, 2004).

10.5.4.1 Changes in CNS Receptor Density and Activity

There are profound homeostatic changes that occur over prolonged exposure to addictive substances and alter the internal environment. For example, significant reductions in D2 dopamine receptors in key reward structures, including the Nucleus Accumbens, may influence mood, craving, and associative memory, as well as having downstream effects on gamma-aminobutyric acid (GABA) and endogenous opiates (Young, Lawford, Nutting, & Noble, 2004). Indirect sensitization of dopamine neurons may also occur via changes in stress-induced glucocorticoid release (Uhart & Wand, 2009) that mirror changes in the macro-environment, and emphasize the potential importance of effective stress management. Treatment of secondary depression or dysthymia may also affect neurotransmitter activity, as may environmental selection, social functioning, and confidence. Limitations to neural recovery may occur directly (e.g., from neurotoxic effects of substances) or indirectly (e.g., via nutritional deficits or brain trauma).

10.6   Basic Competencies of the Clinician

All clinical psychologists should have a basic understanding of substance use and misuse, and be able to assess consumption, screen for SUDs, conduct a functional analysis of a SUD and offer a basic evidence-based intervention. They should be particularly adept at dealing with substance-related problems of high population prevalence (e.g., nicotine, alcohol) and low physical dependence. Given high frequencies of other co-occurring disorders in people with substance misuse, practitioners should be able to adjust assessment and intervention techniques from other problem domains to people with co-occurring disorders with high population prevalence (e.g., anxiety and depression), and to clients that are most commonly seen in their clinical practice.

10.6.1 Generalized Competencies

Formation of a Trusting Relationship. While development of *rapport and trust, listening and reflective skills, empathy, warmth, and acceptance* are general competencies across problem domains, the counter-normative nature of substance use problems and the suspicion or hostility towards addiction services that is often seen in clients make it critical that these generalized competencies are highly developed in addiction practitioners. These attributes must be genuinely expressed – that is, psychologists cannot have negative attitudes toward people with addictive disorders if they are to be effective change agents.

Generalized Skills in Assessment and Intervention. Discussion of specific competencies for substance misuse below will assume that practitioners have well-developed competencies across areas covered in Volume I, encompassing the nature, conduct, and reporting of the

following together with skills in referral and liaison with other health agents, giving and receiving effective supervision and consultation, and skills in searching and evaluating research evidence:

- *Interview-based assessments*, including standard diagnostic interviews, mental status examinations, risk assessments, and detailed functional analyses,
- *Common psychometric measures*, including tests of depression, anxiety, quality of life, and cognitive functioning, and
- *Cognitive and behavioral interventions* (e.g., cognitive therapy, problem solving, social skills training, cognitive-behavioral marital interventions, contingency management) for individuals, families, and groups.

The focus below is on application of this knowledge and skills to substance misuse.

10.6.2 Basic Knowledge

To demonstrate competency, a clinical psychologist should have a broad, basic understanding of addictions and their assessment and management, including:

- *Key concepts of substance use and misuse* (as outlined above).
- *Primary psychoactive drugs in current use and sources of information about population consumption patterns*. While the range of abused substances is large and consumption patterns are subject to rapid change, psychologists should know drug classes, basic mechanisms, and the names (including common street names) of frequently misused substances. Ready access to information to community survey data on substance use is also needed. These data can provide normative information to challenge overestimations of the frequency of heavy consumption, and alert the practitioner to emerging consumption patterns.
- *Ethanol content of common alcoholic drinks, standard drink sizes, and recommended maximum consumption limits*. Both standard drink sizes (Devos-Comby & Lange, 2008) and recommended maxima vary across different countries: clinical psychologists should be aware of local practices, and be able to calculate daily or weekly consumption of standard vendor serves of beer, wine, or spirits (excluding cocktails) in grams of ethanol.
- *Intoxication and withdrawal effects, including their duration*. This should cover commonly used substances (caffeine, alcohol, nicotine, cannabis, and in some countries, cocaine) and substance groups (meth/amphetamines/3,4-methylenedioxymethamphetamine (MDMA), opiates, hallucinogens, inhalants). It should include an understanding of the stages and primary features of discontinuation syndromes, particularly alcohol or benzodiazepine withdrawal, which carry significant risks of adverse outcomes, including death (e.g., from seizures). In contrast, heroin withdrawal, which is typically viewed as more dangerous than withdrawal from alcohol, is rarely life-threatening and resembles a severe dose of influenza.
- *Common short- and long-term risks from frequently used substances and substance groups*. These should not only involve pharmacological effects (e.g., alcoholic liver cirrhosis), but also risks from adulterated content (e.g., insoluble substances), mode of administration (e.g., infection via injection), loss of consciousness (e.g., inhalation of vomit), and associated risk behaviors (e.g., injuries, sexually transmitted diseases, nutritional deficiencies,

hypothermia). It should also involve an awareness of common social, economic, occupational and legal consequences, and related deficits in functional behavior and quality of life.

- *Features of key substance-related disorders*. In DSM-IV, this involves an understanding of criteria for substance dependence, abuse, intoxication and withdrawal, and an awareness of substance-induced disorders. Categories or criteria may significantly change in subsequent editions of DSM, and the clinical psychologist should be aware of any changes as they occur.
- *Factors associated with substance uptake and misuse*. This includes an appreciation of subgroups associated with higher rates of substance misuse, and variables correlated with uptake and maintenance of use and misuse. A basic appreciation is needed of potential determinants within the ethnic, linguistic, or subcultural groups that are most likely to be encountered by the practitioner.
- *Factors associated with positive outcomes and relapse*. Practitioners should understand factors and coping strategies associated with natural recovery. They should have a general appreciation of the following, including differences across substances (e.g., alcohol, nicotine) and client subgroups (e.g., low/high dependence, physical disorder, cognitive deficit):

  - Nature and treatment implications of harm reduction, moderation, and abstinence goals
  - Relative frequency of moderation and abstinence
  - Associations of moderation and abstinence with physical, functional, and neuropsychological outcomes

They should appreciate the distinctions between lapses and relapses, and common risk situations for lapses.

- *Cognitions, emotions, and behaviors commonly associated with risks of misuse and relapse*. These cognitions should include low self-efficacy for substance control, permissive thoughts, overly positive substance expectancies, craving, and goal violation effects. Primary affective foci are depression, anxiety, anger, while key behaviors include deficits in substance refusal and alleviation of dysphoria.
- *Theoretical models of substance misuse, relapse, and recovery*. Clinicians should appreciate the nature and evidence status of key theoretical approaches and exemplars, and their application to practice. Awareness of the Stages of Change model, its descriptive nature, and utility, are needed.
- *Strategies to assess consumption*. These include quantity–frequency measures, Timeline Followback (Sobell & Sobell, 1992), and self-monitoring.
- *Psychometric instruments in common use*. Knowledge of psychometric characteristics for measures of common addictive disorders, in the areas of screening (e.g., the Alcohol Use Disorders Identification Test; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993) and degree of dependence or functional impact (e.g., Severity of Alcohol Dependence Questionnaire; Stockwell, Hodgson, Edwards, Taylor, & Rankin, 1979; Fagerstrom Tolerance Questionnaire; Tate & Schmitz, 1993).
- *Medical management*. Practitioners should have a basic awareness of withdrawal and medically supported detoxification regimes and pharmacotherapies for substance dependence.
- *Psychological interventions and their relative evidence base*. Appreciation is needed for strategies with a strong evidence base and for the lack of evidentiary support for confrontational methods. The knowledge should be sufficient to make an informed referral and know contexts where a basic generalized competency (e.g., social skills training, meditation,

relaxation training) can usefully be applied. A more detailed knowledge of brief interventions including MI and of relapse prevention (including identification of high-risk situations and related problem solving) is required.

- *Common ethical issues in addiction practice*. Substance misuse can present significant legal and ethical challenges for practitioners, especially where there are negative potential consequences of full disclosure (e.g., forensic, employment, housing), and where the clinical psychologist is an agent of the court, employer, or other authority. Awareness of common ethical issues and their resolution is required.

10.6.3 Basic Skills

10.6.3.1 Assessment

- *Accurate estimation of usual and current consumption across all psychoactive substances*. This includes self-report data on usual quantity and frequency of consumption, assessment of current consumption using a Timeline Followback, and application of self-monitoring.
- *Reliable use and valid interpretation of relevant screening instruments.*
- *Family history of substance misuse*. Clinicians should be able to identify the presence and nature of substance misuse by members of the client's immediate and extended family.
- *Personal history of substance use and misuse, and associated factors*. Clinicians should be able to construct a timeline of substance use and misuse and periods of abstinence or moderation, identifying situational contexts for changes over time, together with physical, cognitive-affective, and functional outcomes. The nature and perceived effect of past treatments or self-help involvement should be noted. They should also be able to gather a history of any co-occurring disorders, and relate episodes of those disorders to the substance use history.
- *Situational triggers and consequences of recent substance use and abstention or control*. Both perceptions or expectations and the actual nature and degree of association of triggers and consequences should be assessed. Current risk to the client and others should be covered.
- *Reliable diagnosis of SUDs, using a written standardized protocol.*
- *Preparation of appropriate reports on the above issues and communication of the results to clients, family members, and health care agents.*

10.6.3.2 Intervention

- *Effective conduct of a brief intervention*. This involves feedback of assessment information (including population data), provision of informed advice, assistance in developing a behavior change plan, and follow-up of progress.
- *Basic competence in conducting a motivational interview*. This includes the six principles of a mnemonic such as FRAMES (feedback, responsibility, advice, menu, empathy, and self-efficacy; Miller & Rollnick, 2002), and key strategies to elicit change talk (e.g., decisional balance, values exploration).
- *Application of clinical psychology interventions from other domains*. These techniques should include effective education (e.g., about standard drinks), contingency management (e.g., for abstinence), problem solving (e.g., for high-risk situations), social skills training

(e.g., for substance refusal), including effective use of modeling, cognitive therapy (e.g., for overly positive substance expectancies), CBTs for couples and families (e.g., to elicit nonintrusive social support for change, address social triggers for substance use, or reduce carer distress), and development of pleasurable or achievement-related activities and roles that are inconsistent with substance use.

10.7   Expert Competencies of the Clinician

Expert or specialist clinicians should have a higher level of knowledge, skills, and self-efficacy in all basic competencies, and be able to deal with more complex presentations or assist people who have not responded to basic interventions. They should be able to adapt their assessment and treatment approach to people of different ages, genders, or ethnic or cultural backgrounds. In addition, treatment needs to be responsive to different levels and types of substance use problems, or different maintaining factors, and to those with co-occurring physical or mental health issues. The specialist clinician should maintain a sound, current grasp of developments in addiction practice, emerging data on epidemiology, assessment and treatment, and a high level of skills in evaluating published evidence. The specialist should show creativity in the development of innovative interventions that are tailored to the needs of individuals and subgroups, while retaining consistency with existing research data and with results of a comprehensive functional assessment.

10.7.1 Specialist Knowledge

Addiction specialists should have a detailed and current understanding of:

- *Key substance-related concepts and related mechanisms* (e.g., tolerance, reinstatement).
- *The full range of psychoactive drugs in current use, and recent trends in consumption.* This knowledge should include current street names for these substances, their cost, usual dosage, and the likely nature of their active constituents.
- *Nature of intoxication and withdrawal effects of psychoactive substances in current use.* While the nonspecialist was expected to have a basic understanding of effects from very common substances and primary substance groups, specialists should have a more detailed knowledge of specific substances, appreciate key neural mechanisms in intoxication, and have a broad understanding of metabolism of commonly used drugs (e.g., alcohol) and of drug interactions.
- *Short- and long-term risks from the use of specific substances.* Particularly detailed knowledge is required about risks from substances in common use (e.g., nicotine, alcohol).
- *Features of substance-related disorders.* This knowledge should include a detailed understanding of the nature of specific symptoms of SUDs, and be sufficient to allow reliable differential diagnosis in contexts of significant cognitive impairment or comorbidity. It should cover an appreciation of the features, frequency, causation, management, and prognosis of commonly associated physical disorders (e.g., human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS), Wernicke–Korsakoff syndrome).

- *Factors associated with substance uptake, and with onset and maintenance of misuse.* An understanding is needed of the current status of variables associated with the onset and maintenance of substance misuse, and with relapse and recovery. This includes an understanding of the heritability of alcohol and other substance misuse, and a basic appreciation of specific genetic or other physiological hypotheses and their evidence base. A sophisticated understanding of ethnic, linguistic, or subcultural factors should be present, especially in relation to groups that are most likely to be encountered by the practitioner.
- *Factors associated with positive outcomes and relapse.* Specialists should have a detailed appreciation of processes underpinning lapses and relapses, maintained recovery, relative merits, and applications of harm reduction, moderation, and abstinence goals.
- *Cognitions, emotions and behaviors commonly associated with risk of misuse and relapse.*
- *Theories of substance misuse, relapse, and recovery.* The specialist needs a detailed knowledge of the current evidence on specific models, and their relative utility.
- *Evidence status of strategies to assess consumption, and ways to maximize accuracy.*
- *Psychometric instruments for screening, degree of dependence and functional impact of substance use, and their relative reliability, validity, and utility.*
- *Medical management.* Specialists should have a detailed appreciation of the nature, evidence base and indications for: (a) medical treatments for withdrawal and detoxification, and (b) pharmacotherapies for substance dependence. Knowledge of these interventions should include a basic appreciation of common complications or side effects and their management, and be sufficient to allow informed referral and collaboration, but not primary responsibility for their application.
- *Psychological interventions and their relative evidence base.* This knowledge should be sufficient to underpin an evidence-based application of a wide range of preventive and treatment strategies, including interventions for people with high levels of dependence or complex co-occurring problems. A particularly sophisticated knowledge of brief interventions including MI and relapse prevention is required. Specialists should also have a detailed appreciation of TSF and other self-help approaches in common use, and of potential synergies with other interventions.
- *Ethical and legal issues in addiction practice.* A sophisticated awareness of a wide range of ethical dilemmas *and* an ability to critically analyze alterative resolutions is required.

10.7.2 Specialist Skills

10.7.2.1 Assessment

- *Effective engagement of reluctant or suspicious clients in assessment.*
- *Conduct of assessments in challenging contexts (e.g., other ethnic settings, or in the presence of cognitive dysfunction or other comorbidity).*
- *Accurate estimation of usual and current consumption across all psychoactive substances.* This includes the use of multiple imputation methods (e.g., amount and frequency, cost, usual purchase amount), resolution of conflicting information from multiple sources, sensitive application of a bogus pipeline technique, reliable and valid administration of a breath analysis for carbon monoxide or alcohol, and knowledge of biological assays.

- *Appropriate selection, reliable use and valid interpretation of psychometric instruments* to screen for SUDs, and assess variables such as degree of dependence, functional impact, coping strategies, self-efficacy, substance expectancies, and social support.
- *Conduct and reporting of a detailed functional analysis, incorporating historical and current aspects*. This should include an ability to undertake assessment in the style of a motivational interview, assess the degree of contingency, disentangle aspects relating to each of multiple substances, and assess the degree of interrelationship between co-occurring disorders or other problems. An expert, evidence-based assessment of specific risks to clients and others can be given.
- *Reliable diagnosis of SUDs*. This should include a high level of reliability in the use of a standardized diagnostic interview, including the assessment of the independence of potentially comorbid disorders.
- *Preparation of reports on the above issues, and communication of the results*. This should include the ability to prepare and defend an expert forensic report and identify appropriate multidisciplinary management strategies or referrals where indicated.

10.7.2.2 Intervention

- *Expert competence in conducting a motivational interview*, including its application to subgroups in different affective states, or with varying cognitive abilities and personalities.
- *Application of clinical psychology interventions from other domains*. A high level of skills is expected, in modifying these techniques to people with SUDs, including those with severe substance dependence or co-occurring disorders, and in developing individually tailored, integrated, and multicomponent treatments, based on needs, capacities, and goals of the client, as identified in a functional analysis.
- *Expert competence in specific strategies* such as cue exposure and relapse prevention and in the integration of psychological intervention with medical or self-help approaches is needed.

10.7.2.3 Consultation and Supervision

The expert clinician is not only expected to have specialist skills in case management; but also to maintain a leadership role. In both consultation-liaison and supervision, the addiction specialist should be able to clearly communicate with practitioners from different disciplines or domains of practice and with varying levels of existing knowledge.

The nature of consultation-liaison and supervision or mentoring skills do not significantly differ from their application in other practice domains: The primary distinction here is the content that is being discussed. Consultants provide an authoritative and timely opinion on assessment and management, which is based on a sound assessment and detailed understanding of the current literature, and acknowledges its limitations (e.g., expertise, opportunity to assess the client, state of the field). Management recommendations should provide sufficient information for the other practitioner to implement them effectively, or recognize the necessity for additional training or client referral.

At times, consultation will merge into informal supervision. However, formal supervision typically involves a negotiated agreement for regular contact and a focus on practice-related work based on supervisees' needs and negotiated goals (Kavanagh, Spence, Wilson, & Crow, 2002). While supervision frequently incorporates reflection on practice and related problem solving, common deficits are in the observation of practice, modelling of skills by the supervisor, and skills practice within sessions (Kavanagh et al., 2003).

10.7.2.4 Research Skills

Most addiction specialists will not publish research throughout their career, but day-to-day clinical practice will require a sophisticated and current understanding of research methodology and the abililty to evaluate and appropriately critique research reports.

10.8   Transition from Basic Competence to Expert

Basic competence is expected to be attained by the end of clinical psychology training programs, based on required units and clinical placement experience. Core units of generic clinical programs are unlikely to contain sufficient learning and experience to prepare addiction specialists, although elective coursework and placements could offer a sound foundation.

It may be possible to progress from a basic level of clinical competencies to a specialist or expert level by a combination of extensive supervised practice within an addiction setting, self-directed reading, participation in workshops, and conference or colloquium attendance. Feasibility of this route would be heightened if the practitioner had undertaken elective addiction units in their clinical program. However, a systematic and comprehensive coverage of expert competencies is best assured by the development of specialist tertiary programs and assessment procedures to ensure that competencies have been acquired.

A multidisciplinary postgraduate program on addiction or a postgraduate program for addiction counselors offers some benefits above self-directed learning, although its benefits would fall short of those from specialist psychology programs. Depending on their content, some multidisciplinary programs can offer training toward selected specialist competencies. However, it is difficult for multidisciplinary addiction programs to develop specialist skills to levels that would qualify a practitioner as an expert clinical psychologist in addiction, unless it had coursework and placement streams for specific professions to such an extent that it became indistinguishable from programs specifically for clinical psychologists.

We propose that clinical psychologists who wish to specialize in addiction should have already completed an accredited clinical psychology program, rather than going directly into a specialist program from an undergraduate degree. We take this position because the high occurrence of other comorbidities and their close association with substance misuse require that assessment and management of addictions take account of the full range of clients' problems, rather than exclusively focusing on substance use. Development of addiction as a subspecialty of clinical psychology provides a practitioner with greater breadth and flexibility of skills and with greater occupational choices and utility to services than would be offered by addiction psychology as a totally separate type of psychology practice.

We argue that a post-clinical program in addiction should be of at least a year's duration, in order to cover the expert competencies mentioned above in sufficient breadth and depth. It should include substantial structured clinical experience in the management of substance misuse under close supervision of clinical psychologists with an addiction specialty. A substantial part of specialist placements should be in a specialist addiction facility, in order to obtain an understanding of multidisciplinary addiction teams.

While basic competency in addiction practice requires a general appreciation of research and technological developments, there is a much greater requirement on specialists to maintain currency of their expert knowledge and skills. A specialist license or other recognition would require satisfaction of ongoing professional development, which ideally should include assessments to demonstrate the acquisition of knowledge and skills rather than just attendance.

10.9   Summary

Much of the knowledge and skills that are required for clinical psychologists to practice in substance misuse can be mapped from elements of sound clinical practice (e.g., development of rapport and engagement, conduct of a functional analysis, application, and interpretation of psychometric assessments, report writing, contingency management, ability to work in a multidisciplinary team). Other competencies can be mapped from those in other problem domains such as anxiety (e.g., exposure and response prevention), depression (e.g., cognitive therapy), or social skills. The primary task in these generic competencies is to appreciate their relevance to substance misuse (e.g., the social skill of substance refusal), and learn how to modify them for people with substance misuse.

A second set of competencies is also familiar, since although they originated in substance misuse, they now have wider application. Examples are motivational interviewing and relapse prevention based on prediction of high-risk situations. If these competencies are not already in the standard preparation of clinical psychologists, they should be.

Other aspects, such as an understanding of the nature and effects of substances, mechanisms underlying their effects, risk factors for substance misuse, processes of recovery or relapse, and relevant pharmacotherapies, are more specific to substance misuse domain. Because of the high frequency of substance misuse and its importance for outcomes from other disorders, clinical psychologists should be able to deal with low-severity and commonly occurring substance misuse, if they are to be effective as generalist practitioners.

Specialists of course require a more sophisticated understanding. Since the field is still evolving rapidly, the knowledge of both needs to remain current.

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11 Cigarette Smoking

Michael J. Zvolensky · Kirsten Johnson · Andrew R. Yartz ·
Ellen Leen-Feldner

Abstract: There are currently about 1 billion cigarette smokers worldwide. Despite legal regulation against the sale of cigarettes to persons under the age of 18 years, smoking among adolescents is nonetheless highly prevalent. Despite significant public health measures focused on reducing adolescent smoking, rates have not significantly declined. These prevalence findings are alarming, as smoking is a leading preventable risk factor for medical illnesses such as heart disease, a variety of pulmonary diseases (e.g., chronic obstructive pulmonary disease) as well as many types of cancer. Thus, there is a pressing need to understand better manage cigarette smoking and related forms of tobacco use. With this background, the purpose of the present chapter is to provide an overview of the prevalence, detection, current theoretical models, and treatment options for cigarette smoking and nicotine dependence.

11.1 Overview

The need for public health awareness and evidence-based clinical care for cigarette smoking, the most common form of tobacco use, remains a major health-care priority in the USA and beyond. Indeed, smoking remains a leading cause of morbidity and mortality in industrialized countries despite systematic efforts to prevent and control the use of tobacco (Centers for Disease Control [CDC], 2007). There are currently about 1 billion cigarette smokers worldwide (Wald & Hackshaw, 1996), out of which approximately 45.3 million live in the USA (CDC). Approximately, 27.6% of men and 22.1% of women in the USA are current smokers (CDC, 1999), and just under 82% of these people are daily smokers. Smoking is prevalent especially among those with 9–11 years of education and those living below the poverty level. About 5% of the US population have smoked cigars last month (CDC), and rates of smokeless tobacco use are only slightly lower (CDC, 1998). Despite legal regulation against the sale of cigarettes to persons under the age of 18 years, smoking among adolescents is nonetheless highly prevalent, with approximately 22% of 12th graders, 14% of 10th graders, and 7% of 8th graders in the USA reporting smoking in the last month (Johnston, O'Malley, Bachman, & Schulenberg, 2007). Moreover, despite significant public health measures focused on reducing adolescent smoking (e.g., Pechmann & Reibling, 2006), rates have not significantly declined. Thus, aside from the existing population of adult smokers, a new generation of youths within the USA is being exposed to the health risks of smoking.

Smoking is a leading preventable risk factor for medical illnesses, such as heart disease, a variety of pulmonary diseases (e.g., chronic obstructive pulmonary disease), and many types of cancer (CDC, 1994, 2002). As one illustrative example, smoking is responsible for almost 31% of all cancer-related deaths (American Cancer Society [ACS], 2006). In addition, it is increasingly becoming recognized that smoking contributes to certain forms of

mental illness. Daily smoking, for example, is concurrently and prospectively related to an increased risk of developing panic attacks and panic disorder after controlling a variety of theoretically relevant factors (e.g., polysubstance use, temperament, demographic variables; Breslau & Klein, 1999; Goodwin, Zvolensky, & Keyes, 2008; Isensee, Wittchen, Stein, Höfler, & Lieb, 2003; Johnson et al., 2000; McLeish, Zvolensky, & Bucossi, 2007; Zvolensky, Kotov, Antipova, & Schmidt, 2003). These data highlight clinically relevant associations between cigarette smoking and development of *both* certain types of physical health conditions and psychiatric conditions. Based upon these and other findings, it is perhaps not surprising that there is a tremendous economic burden associated with smoking and tobacco use. Some relatively recent estimates, for example, suggest smoking-related medical expenditures exceed US$50 billion per year and another US$47 billion per year for disability related to smoking (CDC, 1993).

Given the health risks associated with smoking, it is important to facilitate smoking cessation. Moreover, tobacco users are well aware of the benefits of quitting (CDC, 1990), yet often have trouble maintaining abstinence from smoking. Indeed, quitting smoking not only decreases risk of developing physical and psychological problems, but also increases the survival time among persons who have already developed smoking-related problems (Samet, 1992). Unfortunately, despite reduction in smoking prevalence over the past 25 years, relapse to smoking remains strikingly common. For example, though nearly 70% of smokers in the USA desire to quit (CDC, 2002), approximately 90–95% of smokers who try to quit smoking on their own (Cohen et al., 1989) and 60–80% who attend formal treatment programs relapse to smoking within 1 year (CDC, 2002). Even among smokers who abstain from smoking for 12 months, approximately 40% eventually return to prequit levels of smoking (U.S. Department of Health and Human Services [USDHHS], 1990). Research suggests that the vast majority of smokers returns to smoking within the first 10–14 days after a quit attempt (Westman, Behm, Simel, & Rose, 1997). Due to the difficulty with quitting smoking, many scholars have come to view nicotine dependence as a "chronic disease" (Fiore & Baker, 1995). Such a perspective helps to communicate that nicotine dependence is characterized by high rates of relapse. From a clinical perspective, as we will discuss, a chronic disease perspective could also help inform how individuals and practitioners intervene to work with smoking cessation attempts and define success in relation to it.

11.2 Recognition of Symptoms and the Assessment

Given the severity of the physical and mental health consequences related to cigarette smoking, there has been a focused public health effort to assist those in need of smoking cessation. A critical piece of effectively disseminating smoking cessation practices to patients relies heavily on medical health providers, as these individuals are most frequently the first line of contact with smokers (e.g., physicians, dentists; Albert, Ward, Ahluwalia, & Sadowsky, 2002; McCarty, Hennrikus, Lando, & Vessey, 2001; Wadland, Keefe, Thompson, & Noel, 2000). Unfortunately, clinicians working in medical fields generally fail to properly assess the tobacco use and target it in the context of health services care. Indeed, there is a large corpus of scientific work that documents various facets of this problem (Thorndike, Rigotti, Stafford, & Singer, 1998). For example, Thorndike et al. (1998) found that only about 20% of smokers attending medical clinic visits received counseling in smoking cessation. Other

research suggests that only a minority of smokers who have visited a medical office for care in the past year were offered smoking cessation services (Goldstein et al., 1997). Here, it is noteworthy that smokers with ongoing (current) tobacco-related disease tend to receive the most focused professional care (Thorndike et al.). Thus, it is not until individuals are experiencing ongoing (current) smoking-related medical problems that they are able to receive psychoeducational and/or pharmacological assistance in efforts to quit (Thorndike et al.). Overall, such global neglect of the smoking population is problematic and concerning for numerous reasons, including the fact that individuals often cite physician advice as a key motivating factor for quitting (Thorndike et al.). Within this context, it is interesting to note that barriers for providing smoking cessation that are commonly cited by physicians include lack of perceived competence (Williams, Levesque, Zeldman, Wright, & Deci, 2003), limited time (Jaen, Stange, & Nutting, 1994), and the perception of a lack of motivation and interest in quitting among patients (Young & Ward, 2001). Thus, extant empirical work suggests that some of the most pressing reasons for not intervening among the smoking population pertain to perceptions of professional competence and knowledge about tobacco use and dependence.

Although efforts have been made to understand smoking assessment and cessation counseling practices of various health professionals (Secker-Walker, Solomon, & Hill, 1989; Silagy & Ketteridge, 1998), it is noteworthy that relatively little attention has been applied to mental health professionals. Given increased recognition of the association between smoking and psychological symptoms and disorders (Breslau, Novak, & Kessler, 2004; Covey, Bomback, & Yan, 2006; Hitsman, Borrelli, McChargue, Spring, & Niaura, 2003; Zvolensky et al., 2008), it is clinically important and timely to evaluate the current state of smoking cessation knowledge and training among mental health professionals (Phillips & Brandon, 2004). For example, one study examined knowledge and perceived competence of smoking assessment and cessation among mental health professionals who specialize in the treatment of anxiety disorders (Zvolensky et al., 2005). Results indicated that therapists assess smoking behavior in only about 30% of clients, and often perceive themselves as "definitely unprepared" to deliver smoking cessation treatment. Moreover, only a minority of such professionals (18%) reported having received formal training in empirically based smoking cessation practices during the past 3 years (Zvolensky et al.). When compared to primary care physicians, these specialists illustrated deficits on "basic" cessation counseling practices (e.g., assessing for smoking behavior). Fortunately, mental health professionals who had received formal training in smoking cessation during the past 3 years reported significantly greater levels of perceived preparedness in helping patients quit and delivered a greater degree of evidence-based smoking cessation treatment (Zvolensky et al.). These findings, in conjunction with those focused on nonpsychiatrically oriented medical practitioners (e.g., Secker-Walker et al., 1989), highlight the need to increase formal awareness of, and training in the assessment and treatment for smoking and tobacco use among health-care professionals.

In a systematic effort to implement a uniform tobacco treatment in the primary care setting, a clinician reference guide was established to help guide health-care providers (*Treating Tobacco Use and Dependence*; Fiore et al., 2000). A key aspect of these guidelines is the process of accurately identifying and assessing tobacco use. Consequently, the "5As" were established as a guide to assess and appropriately intervene with smoking behaviors. These include (1) *ask* patient about current and past tobacco use, (2) *advise* and strongly urge patient to consider

quitting smoking, (3) *assess* patient's willingness to quit smoking, (4) *assist* patient with smoking cessation efforts, and (4) *arrange* for follow-up contact with patient following quit date (Fiore et al.). The US Public Health Service (USPHS) continues to recommend these guidelines, promoting the relative efficacy of the 5As procedure (Katz, Brown, Muehlenbruch, Fiore, & Baker, 2004), and recent research suggests that implementation of the 5As in the primary care setting is significantly associated with greater patient satisfaction with regard to overall health care (Conroy et al., 2005).

11.3 Maintenance Factors for Smoking and Nicotine Dependence

Given the clinical importance of smoking to health-related issues, a primary goal of smoking research has been to identify factors that contribute to the maintenance of smoking behavior. There has been a myriad of factors studied in this domain of study and a variety of conceptual models for guiding such work (e.g., sensory gratification, nicotine addiction, and dependence models). Here, we highlight two of the more promising and historically influential models of smoking maintenance: nicotine dependence and affect regulation.

Nicotine Dependence. A major factor contributing to the maintenance of smoking behavior is *nicotine dependence.* Research in this area was historically stimulated by the recognition that nicotine may be responsible for the repeated use of cigarettes. Although marketing campaigns and widespread use of cigarettes and other tobacco products for many years stymied efforts to recognize the importance of nicotine in continued tobacco use, this perspective began to change in the 1980s (American Psychiatric Association, 1980). According to the National Institute on Drug Abuse (NIDA),

▶ [C]igarettes and other forms of tobacco, such as cigars, pipe tobacco, and chewing tobacco, are addictive and nicotine is the drug in tobacco that causes addiction. Nicotine provides an almost immediate "kick" because it causes a discharge of epinephrine from the adrenal cortex. This stimulates the central nervous system and endocrine glands, which causes a sudden release of glucose. Stimulation is then followed by depression and fatigue, leading the user to seek more nicotine. (NIDA, 2006)

A variety of sources of empirical data, in fact, suggests that nicotine elicits euphoric effects when administered in basic laboratory studies (Henningfield, 1984). Studying smoking in the "real world," however, is difficult to document in regard to the effects of nicotine on biological and affective responsivity (Collins, 1990; Gilbert, 1995; Jaffe, 1980). The cornerstone of nicotine dependence is the same as many addictions. That is, the euphoria created by nicotine initially leads people to smoke. Due to the biological adaptation that occurs to repeated drug exposure, an individual requires more frequent doses to achieve the same effect. Thus, they need to smoke more to feel as "good." Such decreased responsivity to a given dose is a process termed *tolerance.* The regular smoker eventually becomes addicted to nicotine and experiences physical withdrawal symptoms in the absence of smoking, which occurs relatively soon after finishing a cigarette. Thus, over time, the regular smoker "needs" nicotine just to fend off withdrawal and feel "normal."

Given the highly addictive nature of nicotine, individuals who abstain from smoking often experience aversive and severe physical withdrawal symptoms (i.e., symptoms emerging from drug reduction in the body; Hughes, Higgins, & Hatsukami, 1990). Withdrawal sensations can

emerge in the form of physiological (e.g., drowsiness, increased appetite, headaches) or psychological changes (e.g., tension, irritability, difficulty concentrating; U.S. National Library of Medicine & NIH, 2007). These sensations typically begin within 6–12 h following smoking cessation, and can last up to 3–4 weeks after quitting (Hughes, 1992). These aversive internal states precipitated by nicotine withdrawal contribute to frequent use of cigarettes (or another tobacco product) to alleviate the aversive internal state. From this perspective, elimination or reduction of aversive nicotine withdrawal symptoms is a central feature of a smoking maintenance model focused on nicotine dependence as the primary explanation for continued cigarette use. In fact, numerous studies document smokers' reports of "feeling addicted" to cigarettes because they help to reduce aversive sensations (see Robinson & Pritchard, 1992). Although this model shares some commonality to negative reinforcement models of drug learning, the central role of nicotine in such models implies a biologically driven origin to recurrent patterns of use. At present, the biological mechanisms underlying the reinforcing effects of nicotine and its sequelae (e.g., withdrawal symptoms) have yet to be unambiguously isolated. There indeed appears to be many factors that affect the reinforcing value of nicotine, including environmental factors, individual differences, and minimal immediate cost of smoking behavior.

Despite the prominence of this dependence perspective of smoking maintenance, some scholars have noted problems with this type of account (e.g., Collins, 1990; Robinson & Pritchard, 1992). Indeed, inspection of the empirical literature on nicotine dependence indicates that there are a number of formidable explanatory gaps in a nicotine dependence model with regard to the maintenance of cigarette use. For example, empirical work suggests that nicotine withdrawal symptoms vary as a function of environmental cues and individual differences to a greater extent than plasma levels of nicotine concentration (Warburton, 1989, 1990). Additionally, relapse to smoking can and often does occur *after* periods of prolonged abstinence when physiological nicotine addiction has passed (Collins, 1990). Moreover, some smokers do not meet the criteria for nicotine dependence (Shiffman, 1989) suggesting that repeated exposure to nicotine does not invariably lead to dependence and regular use (Shiffman, Fischer, Zettler-Segal, & Benowitz, 1990). These findings, and others, challenge the nicotine dependence model as the *sole* explanatory factor in the maintenance of cigarette use. Thus, from a clinical perspective, it is perhaps best to construe continued smoking behavior (maintenance or relapse) as sometimes rather than always involving dependence on nicotine. Even among nicotine-dependent smokers, the nicotine dependence perspective is empirically insufficient in accounting for the large variability in smoking patterns, rates, and related processes.

Affect Regulatory Models. Another perspective that has been forwarded to explain the maintenance of smoking behavior reflects *affect regulation* perspectives (Eysenck, 1973; Frith, 1971; Tomkins, 1968). These smoking maintenance models have fueled a great deal of scientific work and helped stimulate and integrate nonbiologically and pharmacologically oriented perspectives on cigarette use into the larger literature. There have been numerous specific models that could be loosely categorized within an affect regulation perspective focused on smoking. One of the earliest was that of Tomkins (1966, 1968). Tomkins' model is historically important because it focuses on emotional processes and how such states may "motivate" a behavioral (smoking) response. Tomkins suggested that smoking could be reinforced by reducing negative affect and/or enhancing positive affect. Thus, motivation to smoke was principally emotion-defined. In addition, the model was influential with regard to recognizing individual variability in the motivational basis of smoking both across and within individuals.

A similar influential affect regulation model is one forwarded by Leventhal and Cleary (1980). This perspective focused on the reinforcement of nicotine use due to affective states that have been associated (conditioned) to them (Leventhal & Cleary). Specifically, Leventhal and Cleary postulate that smoking behavior is governed by the regulation of affective states that may be created either by the drug itself (e.g., drops in blood plasma levels of nicotine) or situational stimuli (e.g., life stressors). This perspective was usefully built and expanded upon the work of Tomkins and others by explicitly integrating both interoceptive and exteroceptive stimuli in smoking behavior. Overall, such affect regulation perspectives are distinct from the more traditional addiction-oriented models, which were principally focused on biologically driven mechanisms (e.g., nicotine dependence and physical withdrawal symptoms).

A promising and most contemporary affect regulation account of smoking centers, specifically, on drug motivational processes in explaining the maintenance and relapse of smoking (Baker, Morse, & Sherman, 1986; Baker, Piper, McCarthy, Majeskie, & Fiore, 2004). This perspective suggests that regular tobacco use can produce aversive withdrawal symptoms, and smoking to alleviate such sensations may play a central role in the maintenance of smoking. Specifically, as levels of nicotine fall in the body, the addicted individual begins to detect internal (interoceptive) withdrawal cues such as negative affect in an automatized fashion (Baker et al., 2004). Over time, such individuals learn to escape and avoid these aversive internal states through self-administration of the drug (Baker et al.). Consistent with this type of model, there is a robust relation between severity of aversive (emotionally valenced) withdrawal symptoms and smoking relapse (Piasecki, Jorenby, Smith, Fiore, & Baker, 2003; West, 2005). Thus, smoking may therefore serve as a powerful affect regulation tactic for minimizing short-term distressing withdrawal sensations.

Empirical work has largely supported the relevance of affect regulation in regard to smoking. One line of research in this domain has indicated that there is meaningful individual variation in smoking motives and expectancies about the consequences of smoking (Brandon & Baker, 1991; McKennell, 1970; Shiffman, 1993). For example, individuals who tend to fear the negative consequences of internal states (e.g., bodily sensations), compared to those who express less of such fear, are more apt to smoke for negative affect reduction reasons (motives) (Brown, Kahler, Zvolensky, Lejuez, & Ramsey, 2001; Comeau, Stewart, & Loba, 2001; Gonzalez, Zvolensky, Vujanovic, Marshall, & Leyro, 2008; Novak, Burgess, Clark, Zvolensky, & Brown, 2003; Stewart, Karp, Pihl, & Peterson, 1997). For example, Conklin and Perkins (2005) prospectively examined the impact of negative mood inductions on smoking behavior. They found that a negative mood induction resulted in a quickened latency to smoke while simultaneously increasing the number of self-administered cigarette puffs, suggesting that negative affect may "motivate" smoking behavior. Other work suggests that motives related to craving and withdrawal account for variance in treatment outcome during smoking cessation (Piper et al., 2008). Overall, the study of affect regulation processes in regard to smoking behavior appears to be a promising and clinically relevant line of inquiry.

11.4 Mechanisms of Change Underlying Smoking Intervention

With an increasing number of adults seeking assistance for smoking cessation, a critical practical need is to identify clinically relevant factors that can be changed in order to effectively intervene with smoking behavior. That is, identification of malleable "risk factors" for poor cessation outcome. Led by the work of Kraemer et al., groundbreaking conceptual strides have

created a clearer understanding of various risk processes (Kazdin, Kraemer, Kessler, Kupfer, & Offord, 1997; Kraemer et al., 1997; Kraemer, Stice, Kazdin, Offord, & Kupfer, 2001; Kraemer, Lowe, & Kupfer, 2005). To be clear, a *risk factor* is a variable that is related to, and temporally precedes, an unwanted outcome (Kraemer et al.). *Causal risk factors* reflect variables that, when modified in some way (e.g., through an intervention), produce systematic change (increase or decrease) in the dependent variable of interest among persons who did not previously manifest such problems (Kraemer et al.). *Proxy risk factors* are variables that are related to an outcome of interest, but this association is due to the proxy risk factor's relationship with another causal risk factor (Kraemer et al., 2001). Thus, change in a proxy risk factor would not yield corresponding systematic change in an outcome variable; accordingly, a proxy risk factor may "mark" risk, but not explain, or account for, such risk.

Due to the theoretical and clinical importance of the ability to change a risk factor, both risk and proxy factors often are further categorized on the basis of whether or not they are *malleable* (i.e., can be changed or altered). When a risk factor cannot be changed, it can be classified as a *fixed marker*, whereas when it can be changed, it is considered a *variable risk factor* (Kraemer et al., 2005). These terms clarify whether a variable that is related to an outcome over time can be changed via intervention. If so, it is considered a "risk factor" and if not it is better characterized as a "risk marker." A central goal of developing efficacious smoking cessation programs involves efforts to isolate whether an identified variable is a risk marker or a causal risk factor (Kraemer et al.). Both markers and causal risk factors may be important for identifying vulnerable individuals, but only causal risk factors will be the ultimate direct target of an efficacious intervention. Although there is a number of promising risk candidates for smoking cessation from a biopsychosocial perspective (e.g., social support, proximity to smokers, self-efficacy, coping), here, we provide a brief review of two particularly prominent and promising variables underlying therapeutic change: nicotine withdrawal and negative affect.

Nicotine Withdrawal. Given the well-established physiological and psychological disturbances that occur within hours of nicotine deprivation (Hughes et al., 1990), nicotine withdrawal severity (i.e., symptoms elicited by a reduction in the intake of nicotine among regular smokers) may be the strongest predictor of early lapse and subsequent relapse. Since 1988 Surgeon General's report affirmed the role of nicotine dependence in the initiation and maintenance of cigarette smoking (USDHHS, 1988), nicotine withdrawal research has been an emerging focus of scientific investigation (Hughes, 1992; Hughes, Gust, Skoog, Keenan, & Fenwick, 1991; West, Hajek, & Belcher, 1989). For example, Patten and Martin (1996) reviewed 15 prospective studies that attempted to determine whether the severity of nicotine withdrawal was predictive of relapse following smoking cessation. They found that the results of these studies were equivocal, as only six of the 15 studies indicated a relationship between withdrawal and smoking relapse (Patten & Martin, 1996). This work led to the tentative conclusion that *severity* of nicotine withdrawal symptoms alone does not appear to be the key determinant of relapse, stimulating further research on this important idea.

Subsequent work on nicotine withdrawal and relapse has focused on the affective components of withdrawal as a mechanism leading to poor smoking cessation outcome (Baker et al., 2004; Kenford et al., 2002; Morissette, Tull, Gulliver, Kamholz, & Zimering, 2007). Specifically, *negatively valenced* withdrawal symptoms (as opposed to physical symptoms more generally) may be a critical "missing link" in understanding relationships between nicotine withdrawal and smoking outcomes. For example, Piper et al. (2008) recently examined the impact of withdrawal on the ability to remain abstinent from smoking in a randomized double-blind,

placebo-controlled treatment study. Results indicated that a reduction in withdrawal symptoms, via pharmacotherapy, significantly predicts future abstinence rates (Piper et al.). Other studies, focused primarily on the psychological features of withdrawal (e.g., negative affect), have found similar results. Specifically, such research has demonstrated that systematic decreases in negative affect are associated with lower rates of relapse (Ferguson, Shiffman, & Gwaltney, 2006), while greater levels of negative affect are predictive of failed quit attempts (Brown et al., 2001; Japuntich, Jorenby, Piper, Fiore, & Baker, 2007). These studies highlight the importance of implementing intervention strategies aimed at addressing the emotional features of withdrawal in an effort to effectively change smoking behavior.

Negative Affect. A number of emerging lines of evidence also is consistent with the related perspective that negative affect is an important factor in smoking cessation relapse. First, studies indicate that people who smoke consistently self-report that smoking helps them to cope with negative emotional states, most commonly anxiety, depression, and anger (Gilbert & Spielberger, 1987). Moreover, negative affect processes are a particularly common antecedent to smoking (Gilbert, Meliska, Williams, & Jensen, 1992; Hughes & Hatsukami, 1986; Shiffman, 1982). In one study, 75% of subjects in a smoking cessation trial reported that negative affect precipitated their temptation to smoke, with anxiety being the negative emotion most frequently reported (Shiffman, 1985). Second, prospective studies have found that negative affect after quitting predicts poorer cessation outcomes (Covey, Glassman, & Stetner, 1990; Ginsberg, Hall, Reus, & Muñoz, 1995; West et al., 1989). Third, relapse to smoking often occurs in situations involving negative mood states such as anxiety and depression (Bliss, Garvey, Heinold, & Hitchcock, 1989; Brandon, Tiffany, Obremski, & Baker, 1990; Shiffman, 1982). Fourth, lapses occurring in negative affect situations are more likely than lapses occurring in other situations to lead to complete relapses (O'Connell & Martin, 1987). Fifth, smokers who attribute their smoking to negative affect reduction may have particularly difficult times quitting (Pomerleau, Adkins, & Pertschuk, 1978). For example, O'Connell and Shiffman (1988) found that smoking to reduce negative affect significantly predicted relapse at 1-year follow-up. Sixth, as described earlier, affect-related withdrawal symptoms are more predictive of relapse to smoking than measures of physical dependence and physical withdrawal symptom severity (Piasecki, Kenford, Smith, Fiore, & Baker, 1997).

Aside from negative affect during cessation, smokers with emotion-based psychopathology appear to have a particularly difficult time quitting and tend to experience greater degrees of emotional distress during a cessation attempt (Zvolensky et al., 2008). There is now a variety of evidence consistent with this perspective, with the vast majority of it conducted in relation to depression. This work initially focused on the role of a history of depression in cessation outcome (Anda et al., 1990; Ginsberg et al., 1995; Kinnunen et al., 1996); however, more recent investigations have found evidence that smokers with current depressive symptoms are significantly more likely to have problems quitting smoking compared to smokers without such symptoms (Patten, Martin, Calfas, Lenton, & Wolter, 2001). Research addressing the impact of anxiety disorders on smoking cessation is currently very limited. Some recent work has begun to focus on traumatic experiences and smoking cessation such as that of Lasser et al. (2000), who found that in a large representative sample the lifetime quit rate (defined as the proportion of lifetime smokers who were not current smokers) was significantly lower for participants with posttraumatic stress disorder (PTSD) than for participants without mental illness (28.4% versus 42.5%). Hapke et al. (2005) also reported that, compared to those who had not been exposed to trauma, quit rates were significantly lower among those with PTSD. Most recently, Zvolensky et al. found in a controlled prospective test that smokers with PTSD demonstrated

an increased risk of initial lapse compared to smokers with other anxiety disorders and smokers without any current axis I psychopathology during the first week of a quit attempt. No differences were evident, however, between persons with PTSD compared to persons with other anxiety disorders in regard to early relapse, although both of these groups relapsed significantly earlier than persons with no psychiatric disorder history (Zvolensky et al.). These findings suggest that smokers with anxiety disorders such as PTSD may be more apt to experience early problems in quitting (lapse), possibly due to a hypersensitivity to aversive interoceptive cues (Zvolensky & Bernstein, 2005).

11.5 Evidence-Based Treatment Approaches

In combination with research addressing the mechanisms contributing to smoking maintenance, scientific attention has been focused on the efficacy of cessation strategies. At a broad-based level, these treatment strategies can be divided along two key dimensions: (1) brief-intensive strategies and (2) type of intervention model (e.g., pharmacological, psychosocial, combined). In clinical practice, there often is a degree of overlap and cross-fertilization of these two dimensions. For example, an individual patient may first receive a brief psychosocial intervention (e.g., advice on quitting by the treating physician) when visiting their primary care physician, but then graduate to a more intensive combined intervention as needed based upon their relative degree of success in quitting. Here, we review some of the key elements considered effective in smoking cessation practices across these domains.

Brief Clinical Strategies for Quitting. Brief strategies for helping individuals quit smoking are typically applied in medical settings (e.g., dental office, primary care practices), wherein patients are receiving short-term care visits in the order of minutes. This type of care is brief in the sense that it involves a rapid assessment of smoking behavior and history, and offers a minimal therapeutic recommendation that is to be carried out (and reassessed) by the patient. Such care is important to public health efforts to effectively deal with smoking and tobacco use more generally because medical care is often highly time-limited (e.g., 10–15 min in duration; Stange et al., 1998), and many persons will not seek more intensive clinical care if they are able to successfully quit on their own or choose to continue smoking (Jaen, Crabtree, Zyzanski, Goodwin, & Stange, 1998).

For patients who are *currently wanting* to quit, medical practitioners can facilitate such efforts by applying the five As reviewed earlier. Briefly, medical practitioners can help patients quit by routinely asking about smoking behavior, explicitly advising such persons to quit in a personalized way, evaluating willingness to make a (current) quit attempt, assisting in efforts to aid such a quit attempt, and arranging follow-up care to reevaluate progress in quitting. Although these strategies are principally psychosocial in nature, assisting and encouraging patients in a quit attempt can, and often does, involve the administration or recommendation of pharmacological aids such as nicotine replacement therapy (NRT).

For patients *unwilling to quit*, clinicians should assess smoking behavior and attempt to increase the individual's willingness to make a quit attempt in the near future. There is a large scientific literature on the motivational bases to quitting smoking (and other behavior change efforts more generally; e.g., Colby et al., 1998). Such motivational efforts to promote change in smoking and other health-oriented arenas are best received when a clinician is empathetic, genuine, and facilitates personal engagement and empowerment (Colby et al.). For example,

a clinician may help the patient identify personal reasons for quitting (e.g., to live longer, to complete more physical activities), isolating risk for not quitting (e.g., exposing children to dangers of second-hand smoke), and highlighting the rewards in quitting (e.g., feel better physically and psychologically). For many smokers, the expected short-term benefits of smoking (e.g., "smoking calms my nerves") tend to override the more distal, negative consequences (e.g., potentially life-threatening illnesses). The challenge is to move smokers from general acceptance of potential negative consequences ("smoking is dangerous to health") to personally relevant acceptance of reasons for quitting ("smoking is dangerous to my *own* health") (Fishbein & Cappella, 1977). A concurrent focus on the health benefits of quitting may be especially effective in motivating and sustaining efforts to quit smoking (Brown & Emmons, 1991). In all cases, a key aspect to such motivational work with patients is to continually reinforce the self-evaluative motivational process, as not all persons will show dramatic change in willingness to quit after a single recommendation. That is, motivational activities need to be conducted recurrently over time in order to make the ideas crystallize and prompt clinically meaningful behavior change. This motivational issue of particular relevance to smoking wherein the average smokers will need to make multiple efforts to quit in order to ultimately be successful in maintaining their abstinence (CDC, 1999).

For persons who have already quit in the recent past, brief interventions also are needed and useful for maintaining abstinence. Here, relapse prevention tactics are often useful given the high rates of overall relapse in smoking cessation efforts. These relapse prevention efforts are particularly important for the first year following a quit attempt, as this time period particularly is highly risky for relapse. In this domain, minimal practice interventions for relapse prevention can include such tactics as monitoring smoking urges, encouragement and support for remaining abstinent, making nonsmoking lifestyle changes (e.g., physical exercise routines), and isolating and preparing for potential high-risk scenarios for relapse (e.g., attending a social gathering where smokers will be present). More intensive relapse prevention might include such tactics as cultivating cognitive and behavioral coping strategies for dealing with negative mood vulnerabilities, and actively developing nonsmoking social networks.

Intensive Clinical Interventions. There are many instances where brief interventions are insufficient for promoting effective clinical change in regard to smoking cessation. Here, more intensive treatment strategies are often needed to help the individual quit. As a general rule, the more intensive the treatment, the better the odds of ultimate success in quitting (CDC, 1999), but it is also important to match individuals with quitting strategies that are relevant to their needs. As they incorporate a variety of treatment components, intensive clinical interventions are often appropriate for most tobacco users, regardless of the subpopulation in which they fall (e.g., heavily dependent smokers), so long as the individual is willing and able to actively participate in the program (Cromwell, Bartosch, Fiore, Hasselblad, & Baker, 1997).

Once it has been determined that the individual will make a quit attempt via a more intensive treatment strategy, additional assessment is often recommended to provide useful information for the counseling process. Incorporation of personalized information such as current life stressors, comorbid psychiatric or medical conditions, personal reasons for wanting to quit, and available social support allows the clinician to tailor the intervention to meet the specific needs of the patient. In an intensive treatment program, multiple types of clinicians (e.g., primary care, psychologist, cessation specialist) can be effective in providing effective treatment, and clinicians who specialize in the treatment of tobacco dependence are a particularly valuable resource (Fiore et al., 2000). Although tobacco treatment specialists represent a major

resource in efforts to combat the public health burden of tobacco dependence, it is nonetheless noteworthy that research indicates that they are not always utilized by patients (Lichtenstein & Hollis, 1992). Guidelines based upon clinical research recommend that together, the patient and clinician(s) devote a *minimum* four sessions, lasting at least 10 min each, to cessation efforts (Fiore et al.). Intensive treatment programs may be conducted in an individualized or group format, and typically include elements of practical counseling, intra-treatment supportive interventions, and extra-treatment supportive interventions (Fiore et al.).

The goal of practical counseling is to provide the patient with problem-solving and skills training (Fiore et al., 2000). First, the clinician and patient attempt to identify dangerous or "high risk" smoking situations. These situations are specific to each patient, and can reflect events (being around other smokers), internal states (negative affect), or activities (drinking alcohol) that may theoretically increase the risk of smoking urges or relapse following cessation. Second, the clinician and patient develop and practice coping skills aimed at addressing the identified high-risk situations. Coping skills typically involve cognitive and behavioral strategies that will allow the patient to successfully remain abstinent from tobacco. These strategies can include, but are not limited to, learning to anticipate and avoid temptation (e.g., not attending social gathering where smokers are present), implementing lifestyle changes to reduce stress (e.g., engaging in physical exercise on a regular basis), and applying cognitive strategies aimed at ameliorating negative mood states (e.g., decreasing the tendency to catastrophize about stressful life events). Third, practical counseling often provides basic psychoeducational information regarding smoking and cessation practices (e.g., the importance of setting a specific quit date, enlisting others to offer social support during a quit attempt). Patients also are formally educated about the addictive nature of nicotine and corresponding withdrawal symptoms, as well as the role that they may play in prompting a relapse following cessation attempts.

For intra-treatment supportive interventions, the role of the clinician is to provide encouragement, empathy, and concern regarding the patient's quit attempt (Fiore et al., 2000). Encouragement is communicated to the patient as the clinician reviews the efficacy of tobacco treatments now available while simultaneously conveying their belief in the patient's ability to succeed in cessation. Moreover, it is important that the clinician takes care to inquire how the patient is feeling about their current quit attempt (e.g., fears, ambivalence), and responds supportively, expressing willingness to assist with any challenges. The final element of intra-treatment interventions is to engage the patient in communication about the quitting process. According to smoking cessation guidelines (Fiore et al.), the clinician should be specific in querying about the patient's (1) *reasons* for quitting smoking, (2) *concerns* about quitting smoking, (3) *successes* already achieved, and (4) *difficulties* encountered while quitting.

Although intra-treatment strategies primarily focus on the role of the clinician, extra-treatment strategies promote soliciting support from external resources (i.e., friends, family) (Fiore et al., 2000). Elements of extra-treatment interventions include patient training in support solicitation skills, as well as directly prompting patients to seek outside support. This issue of enlisting support from others can be a clinical challenge, as for numerous reasons some individuals may not see the value in, or desire to, have others involved in their quit experience (e.g., embarrassment if they fail, social anxiety about asking others for help). In training the patient to successfully solicit social support, the clinician models effective support skills (as describe above) and assists the patient in practicing making requests for support from loved ones. This activity also may involve educating the patient about various community resources

that are available to assist in their quit attempt (i.e., hotlines, support groups). Such community-based resources can be instrumental in creating a larger network of support for those struggling with quit experiences. Moreover, these community resources may be particularly relevant when other types of support cannot be accessed. Finally, an important responsibility of the clinician in this domain is to help facilitate outside support networks. For example, the clinician may choose to invite supportive persons (e.g., significant other, co-worker, and spouse) to cessation sessions or assign patients to be support "coaches" for one another with interventions conducted in a group format.

In addition to the psychosocial strategies described above, first-line pharmacotherapy has consistently demonstrated beneficial effects for smoking cessation, including the ability to nearly double successful quit rates (Fiore et al., 2000; Hughes, Shiffman, Callas, & Zhang, 2003). Pharmacotherapy for smoking cessation should always be seriously considered as a component of top-level therapeutic care. Often times, it is useful to work directly with a prescribing physician to determine the best medication for a given individual. Currently, there are numerous medications which facilitate smoking cessation efforts, although the mechanisms underlying these effects may differ across specific drugs. Due to the wide variety of pharmacotherapy options, here, we do not review all these medications and their relative efficacy in detail (see Hughes et al., 2003). However, the most popular types of pharmacological agents are those that rely on a safer (i.e., nonsmoking) nicotine delivery system that can be stepped down gradually as needed by the individual. These NRTs include nicotine gum, nicotine inhalers, nicotine nasal sprays, and nicotine patches. All of these agents are focused principally on maintaining blood nicotine levels to decrease adverse withdrawal symptoms upon smoking abstinence (Hughes et al.). It is possible these NRT strategies also may promote an enhanced expectation of success in quitting (placebo effect), although relatively little scientific work has been focused on addressing this matter. Overall, the exact dosing of these NRT-related drugs varies across individuals, as does the relative degree of efficacy (Fiore et al.). Clinically, therapists may work with clients to isolate the best "match" of pharmacotherapy for their individual clients. For example, some smokers may prefer nicotine gum, whereas others may prefer the patch for a variety of personal reasons.

Another drug that has proven efficacious in facilitating smoking cessation is Bupropion (Zyban). This drug blocks neural reuptake of dopamine and nor-epinephrine; it can be prescribed only by pharmacological agents. Although Bupropion is not appropriate for all patients (e.g., individuals with seizure disorders), it may help decrease the aversive experience of quitting (e.g., decreasing negative affect prior to, or during, a quit attempt). Bupropion also can be used in conjunction with NRT strategies, possibly enhancing clinical benefit for certain individuals by targeting different mechanisms of action. It should be noted that there is a variety of other pharmacological drugs that may be helpful to smokers trying to quit not discussed as extensively in this chapter, such as Clondidine and Nortiptyline. As the effectiveness of these drugs for smoking cessation is yet to be empirically determined, an extensive discussion of these medications is beyond the scope of the present chapter.

11.6   Basic Competencies of the Practicing Clinician

We now turn to a discussion of some core clinical competencies by highlighting both "basic" and "expert" treatment strategies, as well as ways to transition from a basic stage of competency

to a more advanced level. This discussion is broadly relevant to clinical practitioners working in medical, dental, and psychological sectors of the health-care industry.

Given the aforementioned description of the widespread prevalence and overwhelming negative impact of smoking and other forms of tobacco use, there is a strong need to distill "basic" and "expert" levels of competency for practitioners. These competencies, at the most fundamental level, are simply training goals that can guide a more efficacious and globally higher-level standard of tobacco-related care. This section of the chapter is not intended to be equally and fully applicable to all practitioners, as there are likely distinct needs and goals of specific types of providers. For example, a primary care physician who interacts with a large number of patients for relatively short periods of time (e.g., less than 10 min) will have different needs and goals than a practicing psychiatrist or clinical psychologist who may see far fewer individuals and for longer periods of time (e.g., 50 min). Similarly, a practicing clinician specializing in care of adolescents (whether medical, dental, or psychiatrically focused) may have different goals than a clinician working primarily with adults, or the tobacco treatment specialist who has detailed training compared to other practitioners and years of experience working with smoking cessation. Thus, it is not surprising that different training competencies and goals have been employed across distinct clinical settings. In the present section, we attempt to distill the most important clinical competencies in knowledge, skill, and proficiency that can be employed across different types of practitioners in order to provide a broad-based resource to a variety of health-care providers. It should be noted, however, that there are numerous tobacco-related agencies and training programs (e.g., America Medical Association, Association for the Treatment of Tobacco Use and Dependence) that offer additional guidelines for the persons whom they principally serve and aim to educate.

The most basic level of competency of clinical relevance focuses on simply being *aware of the scientifically developed knowledge on the prevalence and impact of tobacco and its disorders*. Here, clinicians should initially strive to attain an overall awareness of tobacco use and behavior as it relates to their clientele. Specifically, it is important for clinicians of any background to acknowledge from a conceptual basis that smoking behavior is integrally connected to general medical and psychiatric conditions. By obtaining such knowledge of tobacco use and its disorders, the clinician is better equipped to offer accurate information about tobacco use to patients. This information can include psychoeducational "facts" (e.g., how tobacco may impact lung disease), but also may involve strategies designated (through scientific evaluation) as helpful to quitting. To gain access to this information, practicing clinicians can consider both informal and formal methods of tobacco education. More specific goal-oriented targets can include, but are not limited to, being able to efficiently and capably do the following:

- Describe the prevalence of tobacco use and its disorders
- Describe regional tobacco use patterns
- Describe the negative physical and psychological consequences of tobacco use and dependence
- Describe the importance and role of tobacco treatment, particularly those methods based on evidenced-based care and clinical guidelines
- Maintain a general awareness of emerging research related to the treatment of tobacco use and its disorders
- Describe the biological, social, and psychological influences on tobacco use
- Understand the criteria used for defining tobacco use and dependence

- Understand the need to adapt and tailor information for tobacco cessation to particular patient populations (e.g., smokers with psychiatric disorders, gender-specific information, youth versus adults)
- Communicate an interest and willingness to consult with other resources when tobacco knowledge may be limited
- Understand the most common processes or factors maintaining smoking behavior (i.e., reasons for smoking)

A second basic competency skill domain of clinical relevance and importance pertains to *developing basic assessment and counseling skills for dealing effectively with tobacco use and its disorders*. This domain of competence naturally builds from the foregoing description of general knowledge and awareness. In order to effectively understand and ultimately intervene with tobacco use and its disorders, a clinician needs to utilize knowledge about tobacco and learn to apply such knowledge to more sophisticated assessment and treatment strategies. This area of work necessarily begins with developing a level of "clinical comfort" with tobacco use topics and being capable of engaging a patient in a discussion focused on this topic. For this reason, the basic competency element in this domain requires counseling skills that strengthen interpersonal connection (e.g., rapport, listening to patient concerns). From the counseling perspective, a variety of core skills are necessary. These include, but are not limited to, the following:

- Have the capacity to be an active listener and demonstrate an empathetic stance regarding clinical care involving tobacco-related issues.
- Be able to communicate the strengths and challenges to evidence-based care treatment approaches for tobacco use and its disorders in a nonthreatening manner.
- Be able to understand basic models of behavior change that pertain to tobacco use and meaningfully communicate levels of "motivational stage and readiness" to patients.

From an assessment perspective, basic competencies are needed in order to understand how to adequately address smoking behavior and history. Without this level of proficiency, it will be challenging to document readiness to quit or success in doing so. In the assessment process, there are both historical and individually based variables to consider. The overarching goal is to learn to comprehensively document and obtain accurate information that can be used in a clinically meaningful manner. The assessment process can be usefully divided into two globally phases: an intake (or initial assessment) and ongoing assessment. For the intake assessment, key variables to assess include: the extent and nature of tobacco use from a lifetime and current perspective, documenting current interest and motivation in quitting, employing evidenced-based technologies for documenting tobacco use and dependence (e.g., Fagerstrom Test for Nicotine Dependence; Heatherton, Kozlowski, Frecker, & Fagerstrom, 1991, carbon monoxide tests), identifying (with the patient) barriers to quitting currently, identifying strengths in the patients or the environment (e.g., social support) for quitting, documenting nature of past quit history and relative degree of success in such attempts, and personal as well as cultural variables that may affect smoking-related decision-making processes. Also, the intake assessment process should integrate information about the patient's medical and psychological history (e.g., concurrent substance use) in order to understand how such factors may influence their ongoing tobacco use or attempts to quit.

Ongoing assessments require an understanding of the individual patient and the specific variables that need to be regularly tracked in order to accurately and objectively document

(and understand) motivation to quit and smoking behavior. Here, there will be differences across individual patients, but in most instances actual smoking behavior, ongoing life stressors, and current motivation to quit are important targets. This information can be used to track and understand ongoing efforts to quit. For example, clinicians should take note of each patient's specific thoughts related to smoking (e.g., belief that smoking functions as an effective method of stress management), primary reason(s) for wanting to quit smoking (e.g., health, social stigma), and situations in which smoking is most likely to occur (e.g., when drinking alcohol, driving). This information, in turn, can be applied to help educate the patient about their specific smoking patterns and ultimately help them formulate a plan for making a quit attempt that is individualized to their specific needs and life circumstances.

11.7 Expert Competencies of the Clinician

The expert level of competency subsumes all of the foregoing basic level of competencies and builds on them. A key distinction between the basic and expert levels of competency focuses on the relative degree of experience, training, and skill in treatment planning activities. Here, it is assumed that the practitioner will be actively and systematically involved in the clinical care of the patient in terms of their smoking behavior and attempts to quit. For this reason, there is a focused need on knowledge development and training in specific methods of cessation interventions and how to work with patients to maximize the clinical benefits of such strategies/tactics. Due to the level of skill required to work clinically with smoking cessation, there is a natural need for more emphasis on formal training programs in smoking cessation. Such programs can include elements of motivational approaches for eliciting behavior change among smokers, as well as provide coverage in empirically supported smoking cessation strategies. The first domain of relevance in treatment planning includes *knowledge and training in psychoeducation and pharmacological approaches to smoking cessation*. The competent clinician needs to be capable of delivering the following elements of smoking cessation care:

- Be aware of the utility in providing one-to-one smoking cessation counseling and be able to explain such benefits to patients
- Know the meaning and five As of tobacco treatment (ask, advise, assess, assist, and arrange follow-up)
- Identify and utilize evidence-based treatment approaches for smoking cessation
- Provide clear and accurate information concerning psychosocial methods and clinical strategies for smoking cessation
- Provide clear and accurate information concerning pharmacotherapy available for smoking cessation
- Maintain a working knowledge of relapse prevention methods and other methods to provide ongoing support for smokers attempting to, or have recently made a, quit attempt. (*Note*: Since the majority of smokers who initially quit resume smoking within several months [Hunt & Bespalec, 1974], maintenance is a critical issue for smoking cessation programs. The most commonly used behavioral maintenance strategies are based on the relapse prevention model [Marlatt & Gordon, 1985].)
- Be aware and capable of clearly explaining the benefits of quitting across all ranges of age and the need to tailor treatment as a function of such developmental stage (see also

subsequent section focused on the *identification of subgroups at highest risk for problems in quitting smoking*).

- Be able to present a rationale as to why evidenced-based approaches to smoking cessation outperform other approaches (e.g., cold turkey) in a nonthreatening and engaging manner
- Be able to identify and provide patients with local (accessible) resources for smoking cessation (e.g., quit hotlines)
- Maintain an active level of connection with local smoking cessation resources to facilitate patient management and integrated approaches to care
- Recognize that persons of diverse ethnic backgrounds may have different expectations and clinical needs in the context of smoking cessation than those from the majority culture
- When applicable, cultivate and maintain an active local community resource for persons from ethnic minority backgrounds seeking help with smoking cessation

Beyond the global smoking cessation knowledge and skill at the expert level, there is a focused clinical need to *identify the subgroups at highest risk for problems in quitting smoking and cultivate the clinical knowledge and skill needed to work effectively with them in regard to smoking cessation*. The exact amount of time involved in each domain may be different depending on the type of practitioner (e.g., primary care physician versus psychiatrist or clinical psychologist). For adults, this clinical knowledge can be aimed at various subgroups.

One such subgroup is female smokers who are, or will soon become, pregnant. Research indicates that 12–20% of women smoke during pregnancy, putting mothers and infants at risk for complications such as premature birth, low birth weight, or miscarriage (Orleans, Barker, Kaufman, & Marx, 2000). In fact, over 1,000 infants die in the USA each year because their mothers smoked while they were pregnant (Orleans et al., 2000). Other studies have found that maternal smoking during pregnancy is linked to sudden infant death syndrome (DiFranza & Lew, 1995) and may cause harmful changes in fetal brain and nervous system development (Lambers & Clark, 1996). Interestingly, some scholars have described the pregnancy time period as a "teachable moment" to help women stop smoking (Orleans et al.). Indeed, women are highly motivated to stop smoking during this time, when they are concerned not only about their own health but that of their infants. Strikingly, about 25% of women smokers quit smoking either as they prepare to become pregnant or as soon as they learn that they are pregnant (Ershoff, Mullen, & Quinn, 1989). To manage the unique needs of this population of smokers at the expert level of competency, there is a variety of key domains to develop clinical knowledge and skill. These include, but are not limited to, the following:

- Understand the risk associated with smoking during pregnancy and be able to explain such risk to patients
- Understand the risk of relapse to smoking for postpartum women who have stopped smoking while pregnant
- Demonstrate a working knowledge of the use of NRT and other pharmacological agents for smoking cessation for pregnant women
- Understand and address provider, systems, and policy barriers to routine intervention in prenatal care
- Understand common clinical issues among pregnant females in regard to quitting and relapse, including weight gain, stress, and being around family members that smoke

Another subgroup of high clinical priority is smokers who have existing psychiatric disorders, or are at high risk for developing psychopathology. Tobacco use and dependence rates are disproportionately high among those with psychiatric or mental disorders. Those with psychiatric disorders are nearly twice as likely to be current smokers as those without psychiatric problems (41% versus 22.5%), and smoking prevalence rates increase as the number of lifetime psychiatric disorders increase (Lasser et al., 2000). Individuals with psychiatric conditions represent 22% of adults in the USA, but they consume 44% of all cigarettes sold (Lasser et al.). These disproportionately high smoking rates place those with psychiatric disorders at increased risk for tobacco-related illnesses, and contribute substantially to the high rates of morbidity and mortality observed in psychiatric disorders (Goldman, 2000). There also is evidence that smokers with psychiatric disorders, or risk factors for such clinical conditions, are at increased risk for lapse and relapse during quit attempts (Hitsman et al., 2003; Kalman, Morissette, & George, 2005; Zvolensky et al., 2008). These individuals tend to perceive the prospect of quitting as personally threatening and challenging (Zvolensky et al., 2007), and may have more pronounced motives to smoke for the management of negative emotional states (Gonzalez et al., 2008). To deal effectively with this subpopulation of smokers, expert-level competencies may include, but are not limited to, the following:

- Broadly understand the nature of psychopathology and distinctions between mental disorders
- Demonstrate knowledge of, and clinically familiarity with, evidenced-based psychiatric screening approaches for mental disorders
- Maintain current knowledge about local mental health providers that can be used as local resources for managing the mental health needs of smoking patients
- Recognize that specialized treatment approaches (e.g., more intensive and protracted protocols) may be needed for smokers with psychiatric disorders or vulnerabilities
- Recognize developmental links between smoking and psychiatric conditions

Somewhat related to this discussion of psychiatric disorders, it should be explicitly noted that there is an especially robust co-occurrence of smoking with other addictions. For example, approximately 85% of alcoholics smoke on a daily basis compared to approximately 25% of individuals in nonalcoholic populations (Bobo, 1989). Relative to those who are not alcohol-dependent, individuals with a history of alcohol dependence are nearly five times more likely to smoke regularly (Kozlowski & Ferrence, 1990), smoke at a higher rate, and have greater difficulty quitting smoking (Burling & Ziff, 1988; Istvan & Matarazzo, 1984). This same pattern of findings is evident in those who seek treatment for alcohol problems. Across studies, approximately 70–90% of those seeking treatment for alcohol problems are smokers (Joseph, Nichol, & Anderson, 1993). High rates of smoking are also apparent among individuals who use illicit drugs. For example, Rounsaville, Kosten, and Kleber (1985) found that 97% of opiate addicts in inpatient treatment were daily smokers. Sees and Clark (1991) found in a large, heterogeneous sample of substance abuse patients, that 77% of the cocaine addicts and 85% of the heroin addicts regularly smoked cigarettes. Smoking prevalence is also high for persons with heavy substance use histories in the general population. Chronic marijuana users are nearly four times as likely as those who do not use marijuana to be nicotine-dependent (Henningfield, Clayton, & Pollin, 1990). Likewise, the prevalence of cocaine dependence is almost ten times higher in persons with nicotine dependence relative to normal control participants (Breslau, Kilbey, & Andreski, 1990).

Despite interest in quitting among substance abuse patients, support for smoking cessation interventions within chemical dependency treatment programs is at best weak. Fewer than 50% of program personnel encourage patients to quit smoking, and 40% believe that smoking cessation should *not* be provided within the context of chemical dependency treatment (Bobo & Gilchrist, 1983; Kozlowski, Skinner, Kent, & Pope, 1989). Less than 15% of alcohol treatment programs encourage and/or provide smoking cessation treatment (Sees & Clark, 1993). Concern about smoking cessation during chemical dependency treatment often relates to issues regarding whether cessation efforts will jeopardize abstinence from alcohol or drugs, and/or doubts that alcohol- and drug-addicted patients can mount a serious effort to quit smoking. Yet, there is little, if any, evidence that smoking cessation impairs alcohol or drug treatment outcomes (Bobo, McIlvain, Lando, Walker, & Leed-Kelly, 1998). In fact, smoking cessation during alcohol and/or drug treatment may actually improve outcome. For example, slightly higher rates of abstinence from alcohol use have been reported among those who successfully quit smoking relative to those who did not (Joseph, Nichol, Willenbring, Korn, & Lysaght, 1990). There may be additive benefits when treatment involves targeting multiple behavior problems, particularly if they are functionally related to a common risk process (e.g., deficits in substance refusal skills). Furthermore, applying coping skills to certain substances (e.g., alcohol) and not others such as nicotine may send a "psychologically conflicting" message to patients about their substance use. This inconsistent message may be most problematic for those addictive disorders that typically rely on inhalation-based methods of administration, such as marijuana dependence. Given these issues, expert level of competency for smoking and other comorbid addictions can usefully ensure that following issues are addressed:

- Maintain an awareness of the co-occurrence of substance use and disorders among patients
- Integrate smoking cessation counseling efforts among those with other types of substance use and disorders
- Addiction treatment personnel, specifically, can advise patients to quit, provide motivational interventions for those who are not ready to quit, and offer assistance to those who are ready to quit

Another subgroup of relevance to expert level of competency pertains to youth (persons below age 18 years of age). There are few theoretical reasons to expect that behavioral principles do not apply equally well to adolescents, although research in treating adolescents is in its infancy. Findings from the Monitoring the Future Study (MTF) indicate 47% of adolescents have tried smoking by the 12th grade and 21% are current smokers (Johnston et al., 2007). Youth smoking rates are even higher in some areas of the country (Youth Risk Behavior Surveillance; CDC, 2005). Although rates of smoking among youth have been decreasing since the mid-1990s, the decline is slowing substantially. Indeed, nonsignificant declines were observed in lifetime, 30-day, and daily smoking rates for 10th and 12th graders from 2006 to 2007 in the MTF; small declines were observed for 8th graders on these outcomes. The rates of smoking among youth are alarming, as empirical work suggests that once an adolescent starts smoking, he or she will continue to smoke for greater than 15 years, on average, among both males and females (Pierce & Gilpin, 1996), thereby potentially incurring long-term physical and mental health risks of tobacco use (Jansen, Glynn, & Howard, 1996). Adolescent smoking differs from adult tobacco use in at least two clinically important ways. First, MTF data suggests that youth tend to disapprove of tobacco use (e.g., 80% of 8th graders "prefer to date someone who does not smoke;"

76% believe "smoking is a dirty habit"; Johnston et al.), suggesting adolescent smokers may be marginalized. Indeed, socializing agents may play a particularly important role in adolescent smoking behavior; for instance, empirical work highlights a complex interplay between parental and peer tobacco use in adolescent smoking uptake and acceleration (Chassin, Presson, Rose, Sherman, & Todd, 1998). Second, a key developmental feature of adolescence is temporal proximity to smoking initiation; adolescence is a "high-risk" developmental period in the sense that initiation of smoking is more likely to occur during adolescence than at any other stage of life (USDHHS, 1994). Whereas adult daily smokers report smoking regularly for several years, the majority of adolescent smokers are at an earlier stage of smoking (e.g., experimentation; Johnston et al.). As adolescents progress from experimental to daily smoking, smoking behavior generalizes from a few discrete settings to multiple contexts. Important developmental changes co-occur with this process, including changes in tobacco use expectancies, self-efficacy, automaticity of cognitive processing relating to tobacco use, and diversity of coping repertoire (Brandon, Herzog, Irvin, & Gwaltney, 2004). Taken together, the unique characteristics of adolescence require a sophisticated understanding of the processes that influence smoking initiation and acceleration during this life stage. Such knowledge is critical for forwarding theory, research, and prevention/intervention efforts among youth during this high-risk period. Expert-level competencies in this domain may include, but are not limited to, the following:

- Understand the risk associated with environmental smoke exposure to children in a household.
- Understand the prevalence of smoking among children and adolescents.
- Understand the role of parent and peer modeling in smoking among youth.
- Demonstrate the capability to identify developmental issues with age-appropriate interventions for tobacco treatment.
- Understand that factors related to "resistance" surrounding smoking cessation may be different for youth versus adults.
- Cultivate knowledge in, and having local resources available for, pediatric-oriented care for youth as part of a multidisciplinary treatment approach for tobacco and its disorders

A final area of expertise pertains to *recognizing and enlisting intensive treatment approaches for smokers with particularly high clinical needs*. That is, certain practitioners who routinely deal with high-risk patients may be able to enlist service-based resources to offer an intensive approach to smoking cessation. There is emerging evidence that such programs show promise. DeBusk et al. (1994), for example, evaluated a case management system for patients hospitalized with an acute myocardial infarction that included the following components: (1) in-hospital counseling by a physician lasting approximately 2 min; (2) an in-hospital comprehensive assessment and counseling session conducted by a nurse trained in behavioral problem-solving skills; (3) provision of a self-help manual focusing on relapse prevention and a relaxation audiotape; (4) telephone calls by the nurse 48 h and 1 week after hospital discharge and monthly for 6 months. Patients who relapsed after discharge also were offered one additional visit with the nurse for further counseling as well as nicotine gum or transdermal nicotine. This treatment was compared to a usual care condition that included physician counseling on smoking cessation and nutritionist counseling on dietary change during hospitalization, and physician-managed, lipid-lowering drug therapy after hospital discharge. Patients in the usual care group also had access to group-based smoking cessation program and group exercise rehabilitation.

The intensive case-management system produced a 1-year smoking cessation rate of 70% compared to a rate of 53% for usual care (DeBusk et al.). These promising findings highlight the utility of developing specialized more intensive systems to intervene with smokers, especially those with severe medical problems and enrolled in other medical (ongoing) care, over extended periods of time. Based upon these findings, it is recommended that expert level of clinical standards include the following:

- Maintain an awareness of the severity of the clinical population in regard to unique opportunities to enlist highly intensive approaches to smoking cessation
- Maintain a flexible and integrated approach to smoking cessation care in intensive clinical settings (e.g., inpatient care) which draws upon the collective strengths and resources available to facilitate smoking cessation among specific populations (e.g., hospitalized smokers with heart disease, cancer)

11.8   Transition from Basic to Expert Competences

In providing smoking cessation clinical services, there is a "natural progression" from a basic to a more advanced level of competency. This transition occurs with the corresponding developmental change in knowledge, experience, skill, and proficiency in specific areas of tobacco-related information. Such development can be facilitated by involvement in more formal training and education in tobacco disorders and treatment interventions (e.g., coursework, attending research or clinical meetings focused on tobacco care). The specific elements of competency may be further advanced by the particular clinical need of practitioners. For example, a practicing pediatrician may need more information and skill development that is expressly focused on parents, youth, and the dynamics of the family unit as a whole. This is different from a practicing internist in a hospital setting, who may benefit from knowledge and training in intensive-oriented smoking cessation interventions that can be applied in a multidisciplinary fashion (e.g., involving persons from distinct medical training backgrounds working together on smoking cessation care). Alternatively, a practicing clinical psychologist may benefit most from cultivating skills and knowledge that are relevant to the specific psychiatric population they specialize in treating (e.g., the role of smoking behavior among individuals with depressive or anxiety disorders). Yet, outside of any degree of "natural progression" in competency in a certain domain, there are areas (described in the subsequent sections) that individuals, systems, and communities can focus on to enhance their respective degrees of knowledge and clinical acumen in regard to tobacco use and its disorders.

Enhancing the Individual Level of Professional Development. A central tenet in the transition of increasing one's level of competency involves making a personal commitment to professional development focused on tobacco use and its disorders. Such professional development can be achieved in a variety of ways, including reading tobacco-specific and other relevant journals (e.g., *Tobacco Control, Nicotine and Tobacco Research*), attending workshops and conferences focused on tobacco use and cessation, attaining certification as a tobacco counselor, and meeting regularly with other tobacco treatment-oriented professionals in one's local community to coordinate community-based resources. As described in the previous section, the exact proportion and type of professional development activity can vary depending on the type of professional service position and focus of clinical work. That is, there is no one set formula for success. In all instances, however, there is a pressing need to know how to better access and

evaluate evidenced-based resources for current information regarding tobacco use and its disorders. Thus, developing or maintaining an educational background in basic aspects of scientific methodology is an important component. For many practitioners such as physicians, psychologists, and nurses, this background is likely to have been included in their formal degree training. Yet, for some individuals, who have not received such formal training, seeking training in tobacco treatment certification and supplementary education in scientific theory and methodology will likely be advantageous for maintaining a precise working knowledge of developing tobacco-oriented research.

Enhancing Support Systems for Tobacco Use and Cessation in the Context of Medical Care. Aside from the individual level of commitment to professional development, it is a reality that most medical care occurs within a context that intersects with other health-care professionals. Transitioning from basic to expert levels of competency can therefore often take the form of enlisting in an integrated manner the systems involved in such clinical work. The need for such systems-oriented care is particularly evident given that the educational efforts solely focused on the individual have not always been met with large degrees of success (e.g., Thorndike et al., 1998). Additionally, many individuals seek medical care in medical systems governed by managed care businesses or other third-party payers. As a result, changes to a system of medical care (e.g., the medial practices governed by a specific managed care business) can have a major impact in terms of the type and quality of care administered by practitioners working with that system. Unfortunately, there is evidence that in the USA, system-level care for tobacco use and its disorders is largely underdeveloped. For example, despite the high cost of smoking on our health-care system, smoking cessation treatment is not uniformly paid for by managed care companies and third-party payers (Aakko, Piasecki, Remington, & Fiore, 1999). Similarly, a lack of financial coverage for tobacco-related treatment is evident for individuals on Medicaid (Barker, Orleans, & Schauffler, 1998). Such a lack of economic support has prompted numerous calls for such companies to offer coverage for tobacco use and smoking cessation (e.g., Healthy People 2010 report; USDHHS, 2000). At a minimum, such financial support could likely increase the quality of tobacco-related care delivered to patients by: (1) increasing awareness of the evidence concerning the institutionalized tobacco-oriented care systems (e.g., prompts for practitioners to ask about tobacco use with patients); (2) developing and implementing systems for tracking smoking counseling behavior of practitioners in a specific medical system; (3) offering feedback to practitioners regarding tobacco-related care; (4) working toward developing a team-oriented (multidisciplinary) approach to medical care that expressly focuses on tobacco; and (5) continuing to encourage tobacco-free standards in the workplace, as well as offer empirically validated intervention services to employees who smoke.

Enhancing Public Health Advocacy. Beyond the individual and system level of care, communities can support an increased level of care for tobacco use and its disorders by increasing the focus on public health policy advocacy. This area of work is important in instilling a consistent and community-wide message on the dangers of tobacco use and an awareness of where specialized care can be accessed. Thus, it is important for individuals to be aware of successful community-based legislations (e.g., smoke-free restaurants and bars), and continue to provide support for such activities in the local community. With the increasing globalization of medical and scientific work, it is likely that such community-focused efforts can draw from national as well as international models. In this domain, utilizing the media to offer a consistent public health message may be particularly important. For example, to the extent that youth are taught about the dangers of tobacco in school, and the local community does not permit the modeling

of smoking in high-profile public areas (e.g., restaurants and bars), it may be possible to eventually decrease the percentage of overall youth from becoming enticed to try using tobacco in the first place.

11.9 Summary

Understanding and treating tobacco use is an extremely important public health priority. Although efficacious behavioral and pharmacological interventions have been identified, many clinicians may not apply these promising interventions routinely with smokers and other tobacco users. There is little doubt that there remains a strong need for increased awareness across healthcare providers regarding the appropriate assessment, tracking, and intervention with their patients who use tobacco. Moreover, additional knowledge and research aimed at the development and application of evidenced-based treatment options are needed. It is likely that such work will have the most clinical impact when it is conducted with reference to an explicit scientifically informed theoretical model that draws from extant empirical work. Promising inroads in contemporary research on the maintenance of smoking appear to be on placing an increasing explanatory role for negative emotional processes and emotion regulatory functions of smoking. Clinically, as more practitioners obtain basic and expert levels of competency in smoking cessation, the global public health burden of tobacco use and its disorders can likely be improved.

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12 Sexual Deviation

Yolanda M. Fernandez · Ruth E. Mann

Abstract: Working with sexually deviant clients is a challenging and potentially anxiety provoking endeavour for any clinician. However, it is possible that clinicians working in various settings will eventually be faced with a client who discloses issues with sexual deviance. The types of problems that sexually deviant clients present span a broad range of issues and necessarily require clinicians with strong and varied therapeutic skills. Some clinicians may find this to be a clinical challenge while others may feel the required breadth of skills is an impediment to effective therapeutic intervention. This chapter will review the suggested basic competencies considered important to working with sexually deviant clients. Basic competencies include understanding normative sexual behaviours, using Socratic questioning, using behavioural techniques, generalizing changes in thinking to outside the treatment environment, using group process, and skills for co-facilitation. The chapter moves on to describe competencies that are considered more sophisticated, or "expert" to this line of work. Expert competencies include general therapeutic skill level, interpersonal skills, understanding and accepting clients, using positive language, instilling hope in clients, working collaboratively with clients and personal resilience. Finally, suggestions are made as to how clinicians might move from basic to expert competency.

12.1 Overview

The concept of sexual deviance is a controversial one and is greatly affected by moral judgment rather than statistical evidence (Laws & O'Donohue, 2008). Surveys of general populations reveal high levels of "deviance" – rendering the term literally incorrect. For example, voyeurism is considered to be a paraphilia, yet almost half of adolescent males admit to engaging in opportunistic voyeurism (McConaghy, 2005). Bearing this difficulty in mind, a reasonable working definition of sexual deviance has been proposed to be "paraphilias and related sexual misbehaviors (e.g., rape)" (Laws & O'Donohue, p. 1). In this chapter, we address the clinical skills necessary to work with a client presenting with a paraphilia or who has committed a sexual crime.

Clients struggling with sexual deviance can be a difficult and challenging population for many reasons and, frankly, this is not an area that every clinician would choose. However, while the distinctive issues relevant to this population may pose obstacles in terms of recruiting and training clinicians, those who have chosen to work in this area report that they find the work varied and interesting (e.g., Leicht, 2008). It is imperative that clinicians have a strong and varied arsenal of therapeutic skills, acceptance of others, personal resilience, and flexibility to work effectively with this group. Despite the common misconception that the area of sexual deviance is a "speciality," those working within this area note that the relevant issues are not narrow in focus. In fact, issues relevant to sexual deviance, as you will see in this chapter, cross almost all domains of functioning as a human being. In addition to sexual issues, there are problems with relationships and intimacy, self-regulation,

self-esteem, self-awareness, interpersonal relationships, substance abuse issues, and other more general mental health issues such as depression and trauma. In fact, clinicians working with sexual deviance need to be prepared to handle anything. The broadness of the requirements can be seen as a benefit to clinicians who are interested in expanding their skills, but can also be detrimental if clinicians believe that the population simply poses too many obstacles to effective intervention.

The effectiveness of a treatment ultimately lies in the hands of the clinicians delivering the treatment. The general clinical literature on therapist characteristics has clearly identified both clinician characteristics and techniques that predict beneficial changes in treatment, and those that are related to negative treatment outcome (Marshall et al., 2002). As will be evident from this chapter, while focusing on sexual issues is necessary, it is not sufficient for the treatment of clients suffering from sexual deviance. Although sexually deviant clients may at first glance seem to be unique, in reality, a broad range of skills, many of which are applicable to working with other populations, are critical to this type of work. The therapeutic skills that we take for granted as being necessary to engage, say, depressed clients, are equally necessary for sexually deviant clients. In this chapter, therefore, we will emphasize that excellent therapeutic warmth, empathy, and optimism are vital when working with this population.

12.2   Recognition and Assessment

Clinicians working in a legal, forensic, or clinical setting can expect to have clients essentially identified for them by structures that are already in place. For example, clinicians working within a correctional or prison system will be referred to clients based on their type of offence (e.g., molestation of children). In some systems, clients are in effect sentenced to treatment by the courts, and may, therefore, be involuntary – which is, perhaps, one important way in which the sexually deviant client will differ from the mental health client.

For clinicians not working in a forensic setting, however, sexual deviance issues may be uncovered during therapy for other problems and, as a result, unprepared clinicians may face a significantly greater challenge recognizing and identifying sexual deviance among clients. Part of the difficulty lies in the heterogeneity of the population that struggles with sexual deviance. Problems with sexual behavior occur across socioeconomic groups, educational levels, ethnic backgrounds, and genders. Further, punitive societal views associated with sexual deviance often make clients very unwilling to seek help. Given the stigma associated with sexual deviance and the associated reluctance to self-refer, the majority of research into sexual deviance to date has focused on males who have either been charged with, or convicted of, a sexual offence. As a result, that research will be the focus of this chapter.

Sexual deviance is predominantly presented by male clients. Although there is research to suggest that a small proportion of females may also suffer from some paraphilias (Davin, Hislop, & Dunbar, 1999), females appear less likely to engage in the paraphilias that are illegal (e.g., pedophilia) and, therefore, less likely to come to the attention of authorities or seek treatment because of problems. Around 2% of convictions for sexual assaults involve women (Logan, 2008), although it is generally accepted that criminal convictions underestimate the actual rate of offending by women. Cortoni and Hanson (2005) concluded from a systematic

review of victimization studies that the actual proportion of sexual offenders who were women was 4.8%. Consequently, Logan described sexual abuse by women as "uncommon but not negligible" (p. 493). Generally, clinicians who specialize in sexual deviance can expect to work mainly with male clients and should beware of transferring male models of deviance onto female clients when they do present.

The heterogeneity of the sexually deviant population may create some difficulties in the application of treatment. There have been some attempts to address the issue of client variability by creating subsets of groups classified by sexual behavior, DSM-IV diagnosis, or various classification systems (e.g., Gebhard, Gagnon, Pomeroy, & Christenson, 1965; Groth, 1979; Knight & Prentky, 1990; Seghorn & Cohen, 1980). The most popular method of classifying sexual deviance is likely the current versions of the DSM (i.e., DSM-IV and DSM-IV-TR, American Psychiatric Association, 1994, 2000). However, problems with the DSM in the classification of sexual deviance have been documented by various authors (Levenson, 2004; Marshall, 2006). An identified primary issue is that "sexual deviance" as a term does not exist within the DSM. The section most relevant to issues of sexual deviance appears to be the section on paraphilias. Unfortunately, however, studies of the specific inter-diagnostician reliabilities have not resulted in satisfactory results (Levenson; Marshall, Kennedy, Yates, and Serran, 2002). Further research on diagnostic considerations has been primarily limited to pedophilia and sexual sadism with the other paraphilias receiving almost no attention. Given the above state of affairs, Marshall, Anderson, and Fernandez (1999) have suggested that attempts at classification offer little value and may, in fact, offer a disadvantage. Marshall et al. comment that groups of "mixed" clients provide opportunities for insight, varying perspectives, as well as sharing of common experience. They further suggest that clinicians working with sexual deviance should persuade their sources of funding that DSM diagnoses are not helpful in designing appropriate interventions or making prognoses (Marshall).

Given the difficulties noted with classification systems, clinicians working with sexual deviance may choose to conceptualize cases in terms of problematic versus nonproblematic behaviors and normative versus nonnormative behaviors. For example, a couple attends counseling because they have some disagreement regarding certain sexual behaviors. Perhaps the male partner is interested in engaging in oral sexual activity while the female partner is uncomfortable with this activity. In this case, the sexual behavior in question is problematic, in that it is causing discord between the couple; however, oral sex as a sexual behavior is normative according to research on sexual behaviors practiced by couples (Langstrom & Hanson, 2006) and would not be considered sexual deviance. That said, the clinician would still determine that the couple could benefit from an intervention and might focus the treatment on improving communication between the couple. In another circumstance, a client might mention that he has a fetish for high-heeled shoes but reports that his wife happily purchases high-heeled shoes and models them as part of their sexual activity. In this case, while the sexual interest may be nonnormative in terms of identified sexual behaviors and would probably be considered a paraphilia (fetish), the behavior does not present as problematic and may not warrant further exploration or intervention. Were the clinician to find out that in fact the wife felt displaced by her husband's interest in her shoes during sexual activity, then once again the sexual behavior, in this case also a sexual deviance, could be conceptualized as problematic, and would be a reasonable target for intervention. Certainly some sexually deviant behaviors more consistently result in obvious problems for the clients and the targets of their behavior,

such as sexual activity with children or forced sexual activity. As a result, the focus for clinicians attempting to identify clients with sexual deviance may be to conceptualize cases in terms of the level of distress the behavior is causing the client, or the level of distress that would be caused to others should the behavior be acted out, rather than the specifics of the behavior itself.

12.3   Causal and Maintenance Factors

Sexual deviance is probably caused by a complex interplay of adverse childhood experiences, abnormal neurobiological development (e.g., an overreactive amygdala), and social and emotional difficulties. Adolescence, with its associated sharp increase in sexual and aggressive hormones, is a time when children who are poorly prepared to develop affectionate bonds with others can retreat into a fantasy world where they are more powerful (Marshall & Marshall, 2000). If this fantasy life expands to involve masturbation, then a coping strategy is formed where sex is used to escape from day-to-day anxieties, rejections, and pressures.

Men who have sexually deviant interests typically present with associated beliefs that minimize the harm of expressing their interests (for instance, believing that children are unharmed by sex, or that some women enjoy being raped). These beliefs are often referred to in the sexual offending literature as "cognitive distortions." It is not yet fully understood whether such beliefs precede the onset of sexual deviance, or act as a maintenance factor. Either way, they are usually perceived to be an important target of any intervention. However, not all sexually deviant clients have such beliefs. Some are highly aware that others view their sexual interests as shameful and they have fully internalized this shame.

Other likely maintenance factors include sexual gratification, as the orgasm is a powerful reinforcer, which can quickly shape and maintain sexual interests. Many sexually deviant clients also report enjoying the thrill and danger of expressing an unlawful interest – in the same way that a nonsexual criminal gets a "high" from the knowledge that he is breaking the law. For example, for some serial rapists, part of the attraction of offending may be the sense of achievement and power that is experienced from watching television news bulletins about their offending and knowing that their crimes are perplexing the police. This sense of power over the authorities, as well as over the victim during the offence, can also act as a reinforcer and maintenance factor.

12.4   Mechanisms of Change

In the sexual deviance literature, theories of change have received less attention than theories of causality. In the 1980s, the relapse prevention model was introduced into the sexual deviance field, and remained the dominant model of change for about 20 years. However, in 2005, a large-scale randomized controlled trial of this treatment approach with a convicted sexual offender population concluded that the classical model of relapse prevention did not show a treatment effect in terms of reduced reconvictions (Marques et al., 2005). Two newer models, which have been proposed as a replacement for the Relapse Prevention model, are the self-regulation model (e.g., Ward & Hudson, 2000) and the Good Lives Model (e.g., Ward & Stewart,

2003). Both of these models have been received with enthusiasm, and incorporated into many manualized treatment programs, but so far are largely untested empirically.

The model of change that has the strongest empirical support for forensic populations generally is the Risk-Need-Responsivity (RNR) model (Andrews & Bonta, 1998). This model proposes that an effective treatment must: (a) provide an increase in intensity for those at greatest risk of criminal behavior; (b) target those factors which are empirically established as raising risk of criminal behavior ("criminogenic needs"); and (c) use therapeutic techniques to which the client group are known to respond. Applying the RNR model to sexual deviance provides clarity about the approach that should be taken. First, those at higher risk of criminal behavior must be identified and prioritized for treatment. Second, the targets of treatment must be based on empirical research into the causes of sexual deviance. Third, cognitive-behavioral methods and techniques should be coupled with a warm and motivational therapist style, in order to secure client engagement and change.

12.4.1 Client Motivation

Sexually deviant clients cannot be presumed to be motivated to change. As noted earlier, many of them are mandated into treatment rather than self-identifying. In one study, about 50% of sexual offenders reported that they were uninterested in receiving treatment (Langevin, 2006). There are similarities here with mandated substance misusing clients in particular. In line with motivational interviewing theory (Miller & Rollnick, 1991), motivation to change should not be assumed to be present at the start of treatment, nor is it assumed to be stable. Rather, motivation is expected to fluctuate according to each client's perceptions of gains and strains in treatment.

Motivation for the client to change is increased through:

- Positive therapeutic style (warm and empathic) with an emphasis on positive reinforcement including setting up opportunities for success which can then be reinforced
- Self-esteem enhancing exercises
- An emphasis on inspiring and positive life goals that are seen as incompatible with engaging in the problematic behaviors (see Ward, 2002, for an outline of these goals)
- Group cohesion
- Reinforcement of attitudes and behaviors that are contrary to the problematic behaviors

For example, self-esteem exercises are designed to enhance motivation to change and encourage the belief that life without engaging in the sexually deviant behavior can be satisfying. There is a body of literature suggesting that self-esteem enhancement does indeed increase motivation to both effectively participate in treatment and persist with relapse prevention plans after treatment is complete (Annis & Chan, 1983; Cox, Klinger & Blount, 1991; Marshall et al., 1999).

In addition, it is believed that effective therapeutic processes maintain motivation. For example, Marshall et al. (2003) have shown that a warm and empathic clinician, who is rewarding and somewhat directive, generates significantly greater participation in treatment, and greater behavior and attitude change resulting from treatment. Alternatively, a less empathic unrewarding clinician who engages in somewhat hostile confrontation of the offenders has been shown to reduce participation and generate little or no beneficial changes. Although

historically confrontation has been considered an acceptable approach when dealing with socially stigmatized issues (e.g., addictions, sexual offending), confrontation is no longer considered an appropriate competency for clinicians (Marshall et al., 1999). As noted above, it reduces the impact of treatment. In contrast, a motivational style requires challenging the clients but in a firm and supportive style and such an approach has been shown to be effective with substance abusers (Miller & Rollnick, 1991) and with various other types of behaviors in need of change (McMurran, 2002).

12.5   Evidence-Based Treatment Approaches

Early approaches to sexual deviance were often psychoanalytic in nature. The focus was on helping the client identify and resolve early life conflicts or traumas that were assumed to have triggered the deviant behavior. Sexual deviance was conceptualized as a fixation at various stages of psychosexual development; however, evaluations of this approach to treatment have reported inadequate results (Crawford, 1981). The development of behavioral approaches to treating sexual deviance marked the beginning of empirically based treatment for sexual deviance. Behaviorists considered inappropriate sexual urges to have been "learned" through early associations between sexual arousal and deviant stimuli and maintained through masturbation and fantasy (McGuire, Carlisle, & Young, 1965). Consequently, early behavioral treatment focused on addressing deviant preferences, primarily through aversive therapy. In treatment, deviant stimuli were associated with distressing agents such as nausea-inducing drugs, electric shocks, foul odors, or unpleasant covert images. Fortunately, however, most treatment programs have become considerably more comprehensive and now incorporate cognitive-behavioral and social learning approaches in addition to behavioral strategies.

12.5.1 Evidence-Based Assessment and Treatment Targets

There is a reasonably advanced empirical literature into risk factors for sexual recidivism (e.g., Hanson & Morton-Bourgon, 2004), which provides useful guidance on the essential targets for treating those with sexual deviance (Mann, Hanson, & Thornton, 2008). The established risk factors are often viewed as clustering into four domains (Craissati & Beech, 2003; Hanson, 2000): sexual arousal factors; attitudes tolerant of sexual deviance; interpersonal deficits; and self-regulation deficits.

12.5.1.1 Sexual Arousal Factors

The defining issue that sets sexual deviance apart from most other mental health conditions is, of course, the sexual arousal aspect of it.

Sexual arousal to various stimuli can be assessed in a few ways including self-report and polygraph; however, the most common method for assessing sexual arousal to various stimuli is the penile plethysmograph (PPG) (Marshall & Fernandez, 2003). The PPG can be used for both the assessment of sexual arousal and for treatment of deviant arousal (e.g., pairing deviant images with a noxious substance). There is some suggestion that males who suffer from one

paraphilia are found to suffer from multiple paraphilias when assessed (Abel et al., 1987). Child molesters have been shown to prefer the idea of sexual relations with children to the idea of sexual intercourse with adults, and such a deviant preference has been clearly linked to recidivism risk (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2004). This preference is likely to be especially true for offenders with young, male victims (Seto & Lalumière, 2001). There is less evidence for the notion that rapists of adult women show a preference for coercive sexual activity, although this is probably the case with the most dangerous, repetitive, rape offenders. A substantial number of sexual offenders report ongoing deviant sexual thoughts or fantasies, and associated urges (Abel et al., 1987). Furthermore, many males who have committed sexual offences have been found to be sexually preoccupied, placing abnormally high emphasis on the need to have sexual relations frequently (Beech, 1997; Firestone, Bradford, Greenburg, Larose, & Curry, 1998; Hanson & Harris, 2000; Hanson & Morton-Bourgon, 2004). Suitable targets for treatment within this domain, therefore, include the reduction of deviant sexual arousal and fantasy, the increase in pleasure and arousal to ideas of consenting sex with other adults, and the reduction of the level of importance placed on frequent sexual activity.

12.5.2 Attitudes Tolerant of Sexual Deviance

Dysfunctional thinking styles that have been identified as relevant to sexual deviance include sexual entitlement (Hanson, Gizzarelli, & Scott, 1994); negative views of women and their sexuality (Malamuth & Brown, 1994; Marshall & Hambley, 1996); and general aggressive thinking. Studies have found that supportive beliefs regarding sex with children are held more strongly by child molesters than nonmolesters (e.g., Bumby, 1995) and are held more strongly by high-risk molesters than low-risk offenders (Mann, Webster, Wakeling, & Marshall, 2007). However, the relevance of sexual aggression supportive beliefs for rapists is less well established (e.g., Blumenthal, Gudjonsson, & Burns, 1999). Consequently, treatment should address the way in which clients view sex, the importance of sexual activity in their lives, process the errors they may make in interpreting women's and children's behavior, their beliefs about the lack of harm caused by their behavior and the way in which they see their rights in terms of sexual activity.

12.5.3 Interpersonal Deficits

Clients who engage in sexually deviant behavior have been shown to exhibit a wide range of interpersonal deficits (Marshall et al., 1999). For example, identified sexual offenders tend to have negative expectancies of both themselves and others; may suffer from low self-esteem (Thornton, Beech, & Marshall, 2004), external locus of control, personal distress, under-assertiveness (Fisher, Beech, & Browne, 1993), emotional loneliness (Garlick, Marshall, & Thornton, 1996), and paranoid hostility toward others (Firestone et al., 1998; Hanson & Bussière, 1998; Mann, 2005). Perhaps not surprisingly, given these symptoms, clients avoid intimate relationships with other adults (Fisher et al., 1993; Hanson & Morton-Bourgon, 2004). They may be socially isolated, or may seek the company of antisocial peers (Hanson & Morton-Bourgon, 2005) or children (Underhill, Wakeling, Mann, & Webster, 2008; Wilson, 1999). Appropriate targets for treatment within this domain include intimacy and attachment problems, oversexualization of relationships,

skills to relate to others in emotionally supportive and intimate ways, difficulties with self-disclosure, and conflict resolution. Treatment may also need to explore and change paranoid and vengeful schemas about other people.

12.5.4 Self-Regulation Deficits

Poor self-regulation is a key issue for many psychological issues. Self-regulation problems can be divided into three aspects, following Thornton (2002): lifestyle impulsiveness (such as that associated with psychopathy), poor problem-solving, and lack of emotional regulation. Treatment should aim to reduce impulsivity, teach the skills necessary to think through problems and evaluate solutions logically ("detached coping"; Roger, 1995) as opposed to avoiding problems or reacting emotionally to them, and teach strategies for managing problematic emotions such as anger.

12.5.5 Individual Versus Group Treatment

The Safer Society Survey (2000) reported that the majority of the sexual offender treatment programs are delivered in a group format. Although there is no research to date on the issue, it seems safe to assume that those seeking therapy for sexual deviance issues that have not been identified by the legal system are likely receiving individual interventions. There is, unfortunately, little research on the issue of group versus individual therapy in sexual deviance. Those who favor individual therapy describe numerous advantages to this approach such as increased confidentiality; greater opportunities to explore individual issues relating to a client's specific behaviors that might be embarrassing; and flexibility of session and overall treatment length that can be tailored to client anxiety and intellectual functioning (Abracen & Looman, 2004; Maletzky, 1993, 1998; Williams, 1995). However, advantages to group therapy have also been described by various authors. Jennings and Sawyer (2003) pointed out that according to theories of group process, a group offers unique opportunities to its members that simply are not available in a one-on-one setting. They note that the basis of group therapy is that it gains its therapeutic potency from the interactions and relationships that emerge during the group process (Rutan & Stone, 1993; Yalom, 1995). This is particularly relevant to sexually deviant clients, for whom social and intimate relationships are a key issue. Serran, Fernandez, Marshall, and Mann's (2003) discussion of process issues in sexual offender therapy suggested that effective clinicians use group settings to their advantage to provide opportunities to practice skills, promote reinforcement of individual gains, promote mutual encouragement and support, and create a positive therapeutic atmosphere. While proponents of individual therapy have commented that group treatment is more difficult to tailor to individual needs (Maletzky, 1999), Serran et al. (2003) proposed that more effective therapists may incorporate enough flexibility into their treatment program to appropriately address individual issues within the group setting.

For the purposes of this chapter, the majority of the competencies identified for working in the area of sexual deviance will be important for either individual or group formats. However, some competencies specific to group treatment will also be discussed given the preponderance of this approach for the treatment of some deviant sexual behaviors.

12.6 Basic Competencies of the Clinician

As noted above, the majority of interventions designed to address sexual deviance are cognitive-behaviorally based and presented in a group format. As a result, many of the basic competencies necessary for a clinician working with sexual deviance are also essential for cognitive-behavioral clinicians working with a multitude of other behavioral problems. These basic competencies are described below.

12.6.1 Understanding Normative Behaviors and Theoretical Models of Sexual Deviance

The most basic competency required to work in the area of sexual deviance is a reasonable understanding of human sexuality and the key theoretical models of sexual deviance. An understanding of human sexuality, including normative versus non-normative sexual behaviors, and unusual versus problematic sexual behavior, is critical to working with this client population. For example, a common mistake among novice clinicians working in this area is assuming that sexual activity itself is the problem. Such a belief may lead the clinician to erroneously encourage the client to pursue unrealistic management strategies that are doomed to fail, such as complete abstinence from sex. Kohlenberg and Tsai (1994) describe the importance of context in defining a behavior as problematic or not (i.e., that you cannot judge behavior as normal/abnormal in the absence of context). What is acceptable behavior in one context (e.g., physical aggression in sporting events) may not be acceptable in another context (e.g., aggression during sexual behavior). An understanding of human sexuality, and the role it plays in the lives of humans, as well as a thorough understanding of the theoretical models of sexual deviance, enables clinicians to differentiate between problematic and nonproblematic sexual behavior and encourage appropriate and realistic strategies for clients, which would include a fulfilling, consensual sex life (Ward, 2002). In sexual deviance, some of the behaviors that bring clients to treatment may easily be identified as problematic while other behaviors may not be as easy to define. For example, looking at adult pornography might be considered as appropriate progress for a client who suffers from pedophilia, but perilous for a male who has a history of objectifying women who have contributed to aggressive sexual behavior. In such cases context is an important consideration.

12.6.2 Socratic Questioning Used to Develop Alternative Attitudes, Thinking, and Behavior in Clients

Socratic or open-ended questioning is a basic skill necessary to most insight-oriented therapies, including working with clients with sexual deviance. Research has demonstrated that participatory learning is more effective than allowing clients to be passive in treatment (Spiegler & Guevremont, 1998). Socratic questioning involves the ability to employ questions during therapy that encourage learning and insight through the clients' own reasoning. Although clinicians may guide clients in treatment, clients benefit more when they work to improve their insight and understanding into their problematic behaviors. Consequently, clinicians need to

help clients identify for themselves those factors that have contributed to their problem behavior. As noted earlier in this chapter, a significant factor related to sexual deviance is holding attitudes supportive of the problematic behavior. Socratic questioning helps clients challenge their ways of thinking and encourages them to consider and develop alternative ways of thinking or behaving. Clinicians are trained to ask "who, what, where, when, why, and how questions" that provoke thoughtful responses from clients. They are encouraged to stay away from "closed" questions that engender yes or no responses. As an example, a novice clinician might be inclined to ask a client "Did you feel angry when the woman at the bar refused to dance with you?" which clearly calls for a yes or no answer. A more thought provoking question that would require the client to generate some self-insight might be "How did you feel when the woman at the bar would not dance with you?"

When Socratic questions are used in response to clearly problematic attitudes or cognitive distortions (rather than simply for gathering information), this is often referred to as "challenging" the client. This choice of word can unfortunately mislead some into assuming that a confrontational style should be adopted; this is not the case. We have already noted that an important point to remember for novice clinicians is to avoid a confrontational approach to challenging in favor of a supportive but challenging approach to clients. Although a confrontational approach is sometimes rationalized as "being honest" (Egan, 1970), the fact is that those clients who are struggling to come to grips with issues related to inappropriate sexual behavior are taking responsibility for their difficulties. An aggressive approach is likely to be experienced by the client as demeaning and may result in antagonistic interactions between clinician and client. As a result clients may become cynical about their capacity to change. Our experience training clinicians, however, has suggested that encouraging clinicians to avoid a confrontational approach has sometimes been misinterpreted as an endorsement of an approach that is too soft, and essentially collusive with clients. Clinicians who are overly compassionate do not challenge, do not set firm boundaries, and are at a risk of doing a disservice to their clients.

Socratic questions, therefore, can be challenging (i.e., thought provoking) in their content, but the style in which they are asked should remain gentle although persistent.

The following is an example. Darren believes that women cannot be trusted. He has verbalized the following beliefs:

► Once you trust them (women) that's when they'll bite!
   If only women could be trusted I wouldn't get into this trouble.
   I would never hurt anyone who didn't hurt me.
   They know the rules of the game and they know when they deserve to be punished.
   Women who play with your mind deserve what's coming to them.

Clinicians are trained to use Socratic questioning to encourage Darren to challenge his beliefs. Examples might include:

- Why do you believe all women cannot be trusted? Why do a lot of other people and men trust women but not you?
- What would have to happen for you to believe that women could be trusted? Is this realistic?
- Do you personally know any men who do trust women? Why would they do this? Do you think this has given them any benefits?

- Can you think of a situation in which you knew of a woman who actually helped a man? Why would men from around the world choose to have long-term trusting relationships with women if they were just going to be punished?
- What positive effects would being more trusting of women have on your life?

These questions have the potential to encourage the client to explore occasions where his belief does not apply, and hence could allow him to select a more flexible alternative belief. The questions above could be asked in a variety of tones of voice. The same question, depending on how it is asked, could be perceived as attacking or as motivational. Thus, although Socratic questioning is an important technique when working with sexually deviant clients, it will not work unless it is paired with an empathic style within an established therapeutic relationship.

12.6.3 The Effective Use of Behavioral Techniques Such as Positive Reinforcement, Extinction, and Modeling

The appropriate utilization of behavioral techniques, such as the use of reinforcement, extinction and modeling, can lead to significant and lasting change. In fact many everyday social interactions involve behavioral principles. It should be considered a prerequisite that clinicians have a firm understanding of the nature of reinforcement, punishment, extinction, and modeling in order to implement them strategically and effectively.

A basic behavioral strategy for clinicians is the use of social reinforcers (e.g., nodding, smiling, providing time to talk, listening) and clear statements of approval, support, and agreement in response to functional and adaptive statements and behaviors from the client. Of importance for novice clinicians is that reinforcement must be provided immediately following the behavior change and the link between the behavior change and the reinforcement must be made explicit (i.e., clear statements qualifying why approval or praise is being given). The following is an example of providing specific verbal reinforcement when the client has improved their insight in response to a Socratic question:

► Clinician: What happened when you kept things inside?
► Client: I worried that my relationship would end because I wasn't communicating with my wife and I thought I would end up alone. I felt even more unwanted and unloved. I realize now that when I was with my niece I felt accepted and loved by her. I felt I could tell her things and she wouldn't judge me so I spent more and more time with her because I felt good around her.
► Clinician: That's excellent insight. You have made some important links between your thoughts and feelings about yourself and your relationship and how that affected your behavior in terms of spending time with your niece.

Although it may feel cumbersome or awkward to novice clinicians to interrupt the flow of a discussion to provide specific, and often lengthier, reinforcement, the long-term advantages are well worth it. When reinforcement of gains is nonspecific (e.g., limited to nodding by the clinician), clients may become confused and waste time moving in nonproductive directions in an attempt to "figure out" what part of what they have said reflected improved insight. Additionally, novice clinicians should consistently monitor their nonverbal reinforcement such as head nodding in order to ensure they are not mistakenly reinforcing cognitive distortions or problematic attitudes. Nodding is often used in therapy as a signal that the clinician is engaged

in active listening. However, it is possible that clients will interpret nodding as evidence that the clinician agrees with them. Clearly, attentive listening combined with self-awareness by the therapist is critical to ensure that reinforcement is provided only in response to statements and behaviors that are reflective of therapeutic gains.

How then does the clinician respond when the client's contributions are suggestive of continued problematic thinking and behaving? The human and animal learning literature on the processes of extinction (Bouton, 1994; Falls, 1998) suggest that an unreinforced behavior should disappear. Not only do behaviors extinguish when the responses they previously elicited are explicitly not reinforced, they should also extinguish when they are ignored. However, novice clinicians are sometimes less skilled at simultaneously reinforcing adaptive behaviors while ignoring or "nonreinforcing" problematic behaviors, which tends to be more of an "expert competence." As a result, a basic competency for clinicians working with sexual deviance is to learn to show disapproval of nonadaptive thoughts and behaviors, while remaining supportive. Disapproval may include clear statements of disapproval and supportive disagreement as well as nonverbal expression, such as frowning, and showing decreased interest in the client. As with reinforcement, disapproval should be made immediately following the expression of the nonadaptive thought or behavior and the link between the problematic thought or behavior and the disapproval must be made explicit. The following is an example:

► Clinician: You said your wife told you she had cheated on her prior husband. How do you feel when you think about that?
► Client: I feel completely betrayed and my trust in women is destroyed. I think "she's a slut like every other woman"
► Clinician: (knits brow and tilts head to one side). Wow, that seems like a big leap from one piece of information. Why do think that hearing your wife made a poor decision in a previous relationship makes you feel so angry?
► Client: Well, I thought that this relationship was going to give me everything I wanted, that when I became a husband and father I wouldn't be a failure.
► Clinician: It sounds like you expected that your wife would fix the problems in your life. What do you think are realistic expectations of a relationship?

In the above case, the clinician's response to the client's overgeneralization about women clearly indicates disagreement with the statement using nonverbal signals and then explicitly defines why the client's comment is problematic. Of importance, however, is that the disapproval is also followed with a Socratic question aimed at helping the client improve his insight into the link between his feelings of being a failure, his dependence on his wife to alleviate his insecurities, and his resulting anger when she was unable to do so.

Another critical behaviorally based basic competency for clinicians is the use of modeling for appropriate and pro-social behaviors. Modeling by the clinician should include alternative, pro-social, and more effective expressed thinking and behaviors. It should, of course, take place in all interactions between the clinician and client, and explicitly through statements to do with personal attitudes. Clinicians should be taught to "practice what they preach" within the therapy session. This includes modeling supportive and respectful but open interactions with others as well as modeling how to handle conflicts or mistakes. Novice clinicians may believe they are required to be perfect models, when in fact appropriately handling a difficult situation may have a greater impact on clients than consistently handling things perfectly. As an example from my own clinical work, a client presented at a session as angry and disinterested.

When I asked if something was wrong he responded that in our previous session I had dismissed him and trivialized his contribution when he had attempted to participate in a group discussion. When I reflected on the previous session my impression was that I probably had not reinforced his contribution adequately but did not feel that I had been dismissive or trivialized his contribution. That said, it was clear to me that I had not been as clinically effective as I could have been and I surmised that arguing would make the situation worse. As a result, I apologized to the client and assured him that my desire was to have everyone in the treatment group feel that their contributions were valuable. I acknowledged that there are days when I am better at accomplishing this than others and asked all group members to provide me with feedback after sessions to make sure I was improving this skill. The client appeared taken aback by my response as he likely thought that I would disagree with him. My apology not only modeled an appropriate response to a mistake, but inviting all clients to provide me with input supported that I "practiced what I preached" in terms of seeking others' feedback on my behaviors.

Relevant to novice clinicians is that we draw a careful distinction between *modeling* and *self-disclosure*. Modeling includes the expression by the therapist of, for example, pro-social and functional attitudes and behavior. Modeling should take place in all interactions between clinicians and clients. Self-disclosure is used only to assist clients in understanding that the processes that govern their behavior are essentially normative. The perceptions of all people are to some extent self-serving (Nisbett & Ross, 1980) and it is useful to illustrate this by self-disclosure on the part of the therapist of mundane biased inferences. Personalizing examples of cognitive distortions can illustrate for clients that engaging in cognitive distortions is a common process, but that the key is to recognize when it is contributing to problematic behavior. I have used the example of struggling not to eat chocolate cake that is in the refrigerator while I am on a diet. Relevant cognitive distortions might include: "If I eat it all now it won't be there to tempt me tomorrow" or "I'll eat it today and then start 'fresh' with my diet tomorrow." As mentioned, personalizing the example both normalizes the process of cognitive distortions and portrays the clinician as human. Novice clinicians, however, should carefully avoid disclosing any personal unresolved issues and, particularly, any sexual experiences, from their own history.

12.6.4 Generalization of Alternative Thinking and Behavior Outside of the Treatment Environment

There is no guarantee that client changes resulting from effective Socratic questioning and appropriate behavioral techniques within therapy will generalize to the client's behavior outside the therapy room. In fact, the evidence suggests that in the absence of direct attempts to produce generalization, it is unlikely that changes in the treatment context will appear in the client's daily life (Spiegler & Guevremont, 1998). Thus, creating and implementing strategies designed to help clients practice and use alternative thinking and behavior are critical basic competencies, if generalization is to occur. Role-play rehearsals of appropriate behaviors can provide the opportunity to refine responding before it is practiced in the real world. These practice opportunities are individualized for each client and involve practical assignments related to areas of deficit for that person. For example, a role play in which the client practices having a conversation with someone he or she finds attractive may help the client

feel better prepared to attempt this task in the real world. The clinician must promote the practice of new skills in the client's everyday life, which may require the clinician to seek the cooperation of others, such as friends or the client's intimate partner. The following is an example:

► Client: I felt jealous when my wife went back to work and started going out with friends but was afraid to talk to her about it. I thought if I talked about it, it would make things worse, that she would realize her new life with her job and friends was better than her life with me. I've never been good at talking about things that are bothering me.

► Clinician: Okay – that's an important thing for you to understand, but what makes things easier is practice so I'm going to give you an assignment. I want you to ask your wife how she feels about going back to work. Listen to her response; ask her questions, and then write it all down, including how you felt about what she said. Bring the assignment back to treatment and we'll talk about how the reality of bringing up this issue compared to what you thought would happen.

Of note is that once the client has practiced the assignment outside of the therapy context, he reports back on its implementation and receives feedback and reinforcement. This type of follow-up in terms of the client providing a detailed summary and analysis of their between-therapy assignment is critical. Occasionally new clinicians are so focused on what happens during a therapy session that they fail to follow-up on previously assigned tasks. This, however, leaves the client with the mistaken impression that the tasks are less important than in-session work and thus considerably decreases the chance of generalization of therapy gains. In our experience training clinicians, we have found that novice clinicians sometimes feel more comfortable with purely cognitive therapeutic strategies (e.g., cognitive reframing) and are considerably less comfortable with more behavioral strategies such as role plays. The best response we can provide is that the skill of incorporating, practicing, assigning, and analyzing role plays only improves with practice.

12.6.5 Understanding and Using Group Process

While Socratic questioning and supportive challenging are important skills for a clinician, one of the advantages of working with clients in a group setting is that the group members can do much of the difficult questioning and challenging. Serran et al.'s (2003) discussion of process issues in sexual offender therapy suggested that effective therapists use group settings to their advantage to practice skills, promote reinforcement of individual gains, promote mutual encouragement and support, and create a positive therapeutic atmosphere. Beech and Hamilton-Giachritsis (2005) note that in highly cohesive groups, appropriate challenges by members are more likely to be accepted because participants feel supported rather than attacked. However, creating an environment in which the group is cohesive, supportive, and takes responsibility for each member's progress, is a competency in and of itself. Using the group process effectively requires an understanding of group dynamics and familiarity with the individual group members and how they interact. Clinicians are trained to watch and listen to all group members, observe how they respond to each other, and how they behave when someone else is speaking. A common mistake among novice clinicians working in group settings is to engage in "one-on-one therapy with an audience." That is, to fail to pay attention to

what is going on with other group members when they are focused on issues relevant to one member. One strategy that reminds clinicians to pay attention to the whole group is for the clinician to encourage the other group members to ask the majority of questions and to do most of the challenging, perhaps by consistently asking group members to respond to something that has been said. For example:

► Client: Most women who go to bars are looking to get laid.
► Clinician: What do other group members think about this conclusion?
► Other client: Well, I sometimes go to bars with buddies after work to relax and I would think women do that too. I know my sister sometimes goes to bars with her friends and I don't think she's a slut or looking to get laid.
► Clinician: (watching reaction of other group members to the challenge) That sounds like a more balanced view. What do you think about what [the other client] suggested?

This technique allows the clinician to take on more of an observer role and to assess the process of the group rather than being singularly focused on helping one client make gains.

12.6.6 Cofacilitation of Treatment

Working with a co-therapist can provide distinct advantages but requires a unique skill. Of the few studies on this topic, it appears that more positive gains are associated with co-therapist teams who present as consistent (i.e., provide similar messages to clients), as opposed to inconsistent (Piper, Doan, Edwards, & Jones, 1979). Interestingly, dissimilarity between the clinicians (i.e., gender, age, race, or personality) is also associated with somewhat better outcome. Working closely and effectively with another clinician modeling a relationship that is egalitarian, respectful, supportive, and pro-social and promotes appropriate and acceptable thinking and behaviors can be a powerful tool. For example, a male clinician voicing respectful attitudes and demonstrating this through his interaction and behavior with a female clinician sends a strong visual template for clients on which to base their interactions with members of the opposite gender. Learning to work in tandem with another clinician is a skill that requires flexibility, acceptance, and an ability to identify and promote another person's strengths, but can be a very worthwhile endeavor.

12.7 Expert Competencies

For clinicians working with sexual deviance, expert competencies are reflective of a more sophisticated approach to treatment. Expert competencies require deeper self-insight, and ability to read others' verbal and behavioral cues, including the nuances and subtleties of what clients are saying. Expert clinicians are able to surmise motivations even when the client is not able to articulate their feelings. Finally, expert clinicians recognize a client's underlying schemas, and can apply cognitive therapy techniques to explore and review schema-driven interpretations of situations. Expert therapy involves more proficient use of the cognitive-behavioral techniques described earlier in this chapter but also involves the skills necessary for the effective supervision and management of other clinicians.

12.7.1 Expert Therapeutic Skills

Numerous positive therapeutic features have been identified in the research literature as critical for psychological treatments to be effective. All schools of therapy have identified empathy, warmth, and genuineness as being a therapist's characteristics necessary to generate benefits from treatment. However, in order to be effective with sexually deviant clients, clinicians need to exhibit more than these personal characteristics. As noted earlier in this chapter, this is a challenging population to work with. Clients often feel apprehensive about entering treatment, and may present as unmotivated or hostile. The expert clinician is reflective and strives to be consistently encouraging and energetic, equally with all sexually deviant clients, especially within a group setting.

12.7.1.1 Interpersonal Skills

It is difficult to imagine that expert clinicians could be individuals who are themselves deficient in interpersonal skills. Numerous authors have concluded that the success of therapy is very much dependent on the clinician's interpersonal skills (Beck, Rush, Shaw & Emery, 1979; Egan, 1998; Frank, 1971; Kleinke, 1994; Kohut, 1990; Lambert, 1989; Luborsky, 1984; Rogers, 1975). Certainly empathy, genuineness, warmth, respect, supportiveness, confidence, emotional responsivity, self-disclosure, open-ended questioning, directiveness, flexibility, encouraging active participation, and rewarding behavior have been identified in the literature as having a positive impact on therapy (for a summary of research on these interpersonal skills see Marshall et al., 2002). Additionally, numerous studies have confirmed a relationship between the interpersonal skills of the clinician and maximizing the therapeutic alliance (see Ackerman & Hisenroth, 2003 for a review).

In research on programs targeting sexual deviance, Beech and Fordham (1997) reported that among community-based programs in the UK, the greatest treatment changes were found in groups that were well organized, well led, cohesive, encouraged the open expression of feelings, produced a sense of group responsibility, and instilled a sense of hope in members. A later study found that leader support, described as the help and friendship shown by group leaders, was related to group cohesion and expressiveness as well as other positive group processes (Beech & Hamilton-Giachritsis, 2005). Drapeau (2005) indicated that clients being treated for sexual deviance said they assessed the quality of the treatment based on their perception of the clinician's competence. Positively valued clinicians were viewed as displaying leadership, confidence, strength, competence, and persuasiveness when necessary.

Interpersonal skill as an expert competency includes an openness to consider your own ways of thinking and feeling, behaving and coping, as well as an ability to receive feedback about your strengths and need areas, and then change your behavior based on this feedback. Finally, an expert clinician will have strong self-awareness of their limits as a clinician and appropriate ways of coping with thoughts and feelings generated by working in this field.

12.7.1.2 Understanding and Accepting the Client

Clinicians are drawn from a population exposed to lurid negative stereotypes of the sexually deviant man, and these stereotypes can affect interactions with clients despite conscious efforts

otherwise. Where the client has victimized another person, clinicians, who tend to be empathic people, can find themselves naturally empathizing with the victim and this can lead to an uncomfortable sense of hostility towards the client. Clinicians need to be prepared to reflect constantly on their feelings about their clients; and to drive out any antitherapeutic influence that may arise. Both rejection of the client and low interest displayed by the clinician have been related to negative treatment outcome (Lambert, 1983). This does not, of course, mean that the clinician should collude with sexual deviance or close their minds to its effects on others. Balancing the tension produced by an aversion to sexually deviant behavior coexisting with the need to develop a productive and genuinely optimistic relationship with the client is one of the most demanding aspects of working with this client group. This demand does not, in our experience, lessen over time and should never be considered to have been achieved.

Expert clinicians must therefore be willing and able to understand their clients' perspective and use this understanding when interacting with them. Clients' perceptions of the therapist's involvement, emotional engagement, and positive feelings have been found to determine their view of the value of treatment and their willingness to engage in the therapeutic process (Saunders, 1999). Seligman (1990) examined studies of treatment derived from various psychotherapeutic orientations and showed that positive outcomes were significantly related to an emphasis on client support, display of interest in the client, acceptance of the client's beliefs and values, and an ability to engage clients. When working with sexual deviance, an expert competency is the ability to understand the client, take their perspective, and still accept them as someone with positive features and strengths. For example, a male client who has engaged in sexually aggressive behavior may have difficulty trusting women because of prior negative experiences and this may have contributed to a fear of intimacy. However, these fears may be expressed as hostility or negative attitudes toward women, which can be off-putting to the clinician, particularly if the clinician is female. Having the ability to understand the client's reactions ensures that the clinician will respond appropriately and help the client work through these issues. Similarly, men who have engaged in illegal sexually deviant behavior typically minimize aspects of their behavior or provide justifications for their behavioral choices. While this may be frustrating for the clinician, his or her ability to understand that these clients are trying to protect their self-image and maintain their self-worth can aid the clinician in assisting the client in accepting responsibility while simultaneously protecting their self-esteem. I can remember being involved in a meeting with a number of clinicians who work with sexual deviance when one clinician stated that she "just could not understand necrophilia" (sexual interest in corpses). I thought about the issue for a few minutes and then responded that I could understand that a client might have an interest in a sexual partner who would not resist his or her particular interests. I could also recognize that some individuals derive sexual arousal from the idea that they are engaging in a behavior that others would consider "naughty" or distasteful and therefore necrophilia did not seem that different from other sexual deviations to me. The ability to place yourself in the shoes of another person and attempt to see a behavior from their perspective, no matter what the behavior might be, strikes me as a more sophisticated competency.

12.7.1.3 Using Positive Language

Historically programs targeting sexual deviance have operationalized treatment goals in predominantly negative terms. The focus of the intervention is often described using terminology like *eradicating* problematic issues, *eliminating* negative attitudes, *reducing* cognitive distortions,

extinguishing deviant sexual interests, and having clients *avoid* people, places, and things that are considered to increase risk for engaging in the problematic behavior. Ward et al. (Ward, 2002; Ward & Marshall, 2004; Ward & Stewart, 2003) have suggested that research on the "good lives" (Deci & Ryan, 2000; Emmons, 1996) should be adapted for work with sexual deviance. As noted above, clients who engage in sexually deviant behaviors may be seeking satisfaction of normative needs but do so in ways that cause problems in their lives. The task of the clinician is to teach attitudes, perceptions, thoughts, feelings, and skills necessary to meet needs in a prosocial and effective manner, without negative consequences, with the underlying theory being that a fulfilled and happy person is unlikely to engage in behaviors that are hurtful to themselves and others. To this end, expert clinicians are able to expand the focus of therapy to helping clients develop a satisfying and fulfilling life rather than on simply eliminating problematic behaviors. Consistent with this is Mann's (2000) contention that approach goals are to be the preferred target's treatment. Mann outlined her concerns with traditional Relapse Prevention strategies which concentrate on avoidance-based goals (i.e., things and situations to avoid) but that often fail to appeal to clients or inspire a dedication to improving their lives in other ways. She pointed to an extensive body of literature (Emmons, 1996; Gollwitzer & Bargh, 1996) demonstrating that avoidance goals are rarely maintained, whereas approach goals are more likely to endure. In addition, people who have predominantly avoidance goals are less psychologically healthy, less happy, and less successful than those who have approach goals. In terms of treatment, Cox et al. (1991) demonstrated that alcohol abusers who worked toward avoidance goals were more likely to relapse than those whose targets were appealing approach goals. Comparing sexual offenders who were assigned to relapse prevention programs that either focused on avoidance or approach goals, Mann, Webster, Schofield, and Marshall (2004) found that those with approach goals were more engaged in treatment, completed more homework assignments, were more willing to disclose problems, and were judged to be more genuinely motivated to live an offense-free life.

Similarly, the expert clinician is careful with their terminology. In some programs, for example, cognitive distortions are described as "stinking thinking," which suggests that engaging in distortions is both aberrant and restricted to offenders when, in fact, most people distort or excuse their behavior after a transgression (Maruna & Mann, 2006). The word "grooming," which refers to nonviolent behaviors used to gain cooperation (e.g., buying gifts, paying compliments), has similar negative connotations. Using the word grooming as a descriptor for what are essentially courting behaviors fails to acknowledge that many of these activities would be considered appropriate in a different context. As a result some clients may be at a loss to know how to pursue appropriate interactions. An expert competency is the ability to adopt positive language to aid clients in identifying their existing strengths and adapting these strengths to meet their needs more appropriately. One particularly valuable way to do this is to refrain from labeling clients solely in terms of their offending (e.g., sexual deviant, sex offender, child molesters). Distinguishing people from their behaviors has a long tradition in behavioral research and treatment (Kazdin, 1978), and avoids all the problems inherent in labeling (Fink & Tasman, 1992). It is also important not to allow clients to label themselves in terms of their offending, as the client is then likely to experience disintegrative shame where he sees himself as unchangeable (Tangney & Dearing, 2002). Negative labels for the components of treatment (e.g., "relapse *prevention*," "changing deviant sexual interests") may inexorably draw the clinician to focus on negative goals rather than on more healthy goals, and may cause the clinician to ignore areas of strength in the clients. Renaming Relapse Prevention strategies as "self-management" or "respectful living," or renaming

the components of treatment that target deviant sexual arousal as "healthy sexual functioning," may be more attractive to resistant clients. Using positive language makes it easier to convince clients that they have areas of strength that can be built upon.

12.7.1.4 Instilling Hope for Change

It is striking that some clinicians who work with sexual deviance, and are competent at cognitive-behavioral techniques, continue to hold the belief that sexual deviance cannot be altered. The failure of clinicians to instil hope in clients is likely to lead clients to believe that they do not have the ability to change and has been related to a lack of motivation by clients to make the necessary changes in their lives (Snyder, 2000). Frank (1989) has suggested that hope is the primary factor in producing treatment gains. Clients low in hope have been shown to readily give up in the face of obstacles (Snyder). Snyder suggests that clinicians who do not encourage clients' efforts to practice new skills fail to increase the client's "agentic thinking" or self-efficacy, which is one of the three elements identified as crucial to effective functioning in hope theory. In support of this, one of the aspects of group process linked to treatment changes in sexual deviants was instilling hope in group members (Beech & Fordham, 1997). The way in which clients' past actions are construed by the clinician can negatively impact clients' sense of hope and their belief that they can change. For example, treatment programs targeting sexual deviance typically have clients to identify the needs their sexually deviant behavior was meeting (e.g., sexual gratification, avoidance of intimacy, desire for power and control, acceptance). All too often these objectives are presented as unacceptable when, in fact, they are normative needs and it is the way in which the client elects to meet these needs that is problematic. An expert competency involves interpreting these motivations as reflecting normative needs, which should serve to instil hope in the client that he or she can meet needs more effectively and without negative consequences. Finally, the language we use influences the clients' perceptions of treatment.

12.7.1.5 Working Collaboratively with the Client

In the role of a clinician, it is sometimes easy to perceive that you are in control of the therapy and forget that the person truly in charge of therapy is the client. Even the most manualized or structured therapeutic intervention will be more effective, if the clinician approaches the intervention as a collaborative process with the client and as such working collaboratively is an expert competency. Working collaboratively with clients is a basic competence in the cognitive-behavioral tradition, but has often been excluded from clinical literature about the treatment of sexual deviance. In fact, early text books on working with sexual deviance expressly warned against collaborative working, suggesting that sexually deviant clients will not be able to set healthy goals themselves but will manipulate the therapist into collusion should collaboration be attempted. This assumption has now been challenged, and the need to work collaboratively with clients who struggle with sexual deviance has been described (Shingler & Mann, 2006). The authors note that not allowing clients to select some aspects of their treatment objectives that are personally meaningful may increase resistance and lower motivation to pursue other, possibly crucial, goals. This was supported in Drapeau's (2005) study in which child molester subjects reacted negatively, if they felt they were denied participation in early decision making in treatment or if they

felt pressure or coerced. When clients were excluded from decision making, they became oppositional and resistant because they felt this was their only viable course of action.

A key feature of collaborative working is transparency. Because many sexually deviant clients are present within the criminal justice system, they may have developed an often-justified suspicion of the motives of those employed by that system. Therapists can of course simply hope that their genuine intentions will become clear to the client as therapeutic rapport develops, but in our experience, such suspicions are much better addressed through upfront conversation about the concerns that the client might have.

12.7.1.6 Personal Resilience

Novice therapists are likely to experience some personal reactions when working with sexual deviance. Typically, experiences are reported such as increased vigilance about personal safety, concern about family members, and intrusive thoughts about details that their clients have revealed (Leicht, 2008). Novice therapists should request, and receive, support as necessary to cope with, and learn to manage, such symptoms. Expert clinicians will have developed a range of personal resilience strategies to manage any effects from prolonged exposure to accounts of sexual deviance. Detached coping, where the clinician is able to separate from the client's problems and view them as intellectual challenges rather than personal threats, is the hallmark of the expert clinician. In contrast, emotional coping (including a dependence on others to manage emotional reactions) and avoidance coping are often stages that the novice clinician works through en route to achieving expert status. This is not to say that the expert clinician is immune from experiencing vicarious traumatization – and to repeat comments earlier in this chapter about reflection and self-awareness, the expert clinician will monitor his or her own reactions to the client's disclosures and identify in the early stages when their therapeutic work is affecting them. Expert clinicians are not afraid to ask for assistance in coping, and they have the skills to articulate their experiences and discuss solutions appropriately with others. They will be willing and able to recognize when they may need a break from the work, and to seek feedback within both their personal and professional relationships about how they are seen to be coping by those closest to them.

12.8   Transition from Basic to Expert Competence

In this section, we will consider methods by which novice therapists can develop their competence in working with sexual deviance.

12.8.1 Professional Networks

Clinicians may belong to large or small organizations or may be self-employed. For those in the latter category in particular, the value of belonging to a professional network is hard to beat. Professional organizations, such as the Association for the Treatment of Sexual Abusers (ATSA; in North America), or the National Organisation for the Treatment of Abusers (NOTA; in the UK) to name but two examples, offer training events, e-mail discussion groups, and local support groups for professionals with a client base of this nature.

12.8.2 Supervision

We strongly advise that therapists embarking on work with a sexually deviant client should arrange for professional supervision from someone more experienced in this area. In fact, we would advocate that all professionals, however well qualified or highly experienced, will continue to benefit from the opportunity to reflect on their work from a more detached colleague. Supervision for the novice therapist assists the therapist to locate their clients' problems within a theoretical framework. Supervision for the experienced clinician can assist the clinician to recognize and manage developing stereotypes, along the lines of "All sexually deviant clients are like x."

12.8.3 Keeping Up To Date with the Literature

It is sometimes surprising how little attention clinicians pay to the research literature in their field. This can be the only explanation forwhy so many clinicians continue to pursue outdated treatment models, or address matters with their clients that were advocated 20 years ago, but have since been proved to have no causal link to sexual deviance. The sexual deviance field is advancing rapidly, and we acknowledge that it is time-consuming to remain up to date with the full range of forensic and sexual deviance journals, but membership in a professional organization and/or attendance at professional conferences can ensure that the clinician is aware of at least the major advances in theory and empirical development. And just to push matters even further, we also advocate at least some attention to the broader psychotherapeutic and psychological literatures. We note that most of the major breakthroughs in understanding sexual deviance have occurred when a theory developed in another area of psychology has been adapted, applied, and evaluated among the sexually deviant population. Given the multitude of issues relevant to this population and the overlap of these issues with other mental health populations, it seems prudent to review effective theories and interventions from other areas of psychology rather than consistently attempting to "reinvent the wheel."

12.8.4 Conducting Research

Bill Marshall, a leading therapist and researcher in the sexual deviance field, once remarked to us that clinicians make the best researchers because they know what questions to ask. We would add to this statement that researchers often make surprisingly good clinicians, because they approach clinical work in a scientific, hypothesis-driven, way. Clinicians who also engage in research are more likely to be able to read emerging literature critically and have excellent skills at interpreting the meaning of empirical research for clinical practice.

12.8.5 Being Observed

The fastest way to improve clinical skills is to subject oneself to the observation of others. This can occur in vivo – e.g., by asking a respected co-therapist to act as a "critical friend" for feedback, or by securing permission for a supervisor to sit in on a treatment session. Another, less intrusive, observational method is for the clinician to videotape treatment sessions and then

ask a supervisor to participate in an observation and feedback session. Another variant of observation is for the supervisor to observe a session through a one-way mirror, but the advantage of videotaping is that an excerpt of the session can be reviewed together, as many times as necessary, by the therapist and supervisor, to enable reflection on how the therapist's behavior may appear from other perspectives, including the client's. In our experience, sexually deviant clients rarely object to the taping of sessions, as long as they are given clear explanations of the purpose and the security procedures that will be applied to the tapes.

12.8.6 Observing Others

Both of us have had the fortunate experience of being able to observe expert-level clinicians work with sexually deviant clients as part of our own training, and therefore we speak from the heart in recommending that novice clinicians seek such an opportunity. Learning from modeling is a proven way of developing new skills and enables the novice clinician to figure out strategies in unexpected clinical situations by asking himself or herself, "What would X do here?"

12.9 Summary

The assessment and treatment of sexual deviance is a demanding field. Clinicians working in this area require a plethora of clinical skills to meet the needs of this challenging population. We believe that the basic competencies necessary for clinicians include a good foundation in therapeutic process as well as cognitive and behavioral techniques (e.g., modeling, behavioral rehearsal, contingency management, reinforcement, shaping, and extinction) in order to facilitate the acquisition of skills in clients and provide therapists with strategies for influencing and managing client behaviors. In addition, efforts to ensure generalization of treatment gains to the client's natural environment need to be given careful consideration. Expert competencies require a higher level of personal insight, perspective taking, understanding of group processes, and personal resilience. Expert competencies are primarily gained through experience and a willingness to seek supervision, feedback, and guidance from other experienced clinicians. Although the treatment of sexual deviance may not be for every clinician, those who have dedicated themselves to this area report they consistently feel challenged and that they continue to develop as a clinician throughout their careers.

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13 Marital Dysfunction

William Fals-Stewart · Wendy K.K. Lam

Abstract: The institution of marriage is in a state of great evolution, changing in response to rapidly shifting social values and norms. Indeed, even the definition of marriage is the subject of much heated social and political debate; it is one of the 'hot button' topics in both the scientific and lay press. In the context of such social transition, it is not at all surprising that there has been a rapid increase in relationship distress and dysfunction, evidenced by substantial increases in marital separations and divorce during the last century. Marital dysfunction manifests itself in a number of different ways and is very often marked by deficits in commitment to the relationship, low levels of mutual caring behaviors between the partners, problems with communication, and corrosive conflict resolutions skills. In turn, many dyads seek professional help to address the myriad of relationship problems in efforts to save their marriages in the context of multiple psychosocial pressures. In this chapter, a general description of marital dysfunction is provided. Additionally, a very commonly applied framework for understanding marital dysfunction, referred to as the 'Seven Cs', is described. Methods of relationship evaluation and assessment, including collection of communication samples, clinical interviewing, and use of self-report measures, are reviewed. An overview of empirically supported relationship intervention approaches is also provided, including a discussion of potential mechanisms of therapeutic action. Lastly, fundamental core and expert competencies for clinicians who provide relationship therapies are described, along with a brief description of the transition from basic competencies to expert.

13.1 Overview

As well chronicled in both the scientific and lay press, the institution of marriage in the USA and throughout the world is in a state of swift evolution, dynamically changing in concert with, and in response to, very rapidly shifting social values and norms. The cultural shifts that have had the greatest impact on marriage are the more liberal attitudes about sexual relationships and physical intimacy, as well as the ever growing economic and political power of women in our society, not to mention the substantial reforms in divorce law (Gurman, 2008).

The evolving state of marriage can best be understood when viewed through the lens of recent history. May (1980) provides a cogent analysis of the change in marriage from the late nineteenth century through much of the twentieth century. As the nineteenth century was drawing to a close, marriage was accepted by the adult population as a vehicle that facilitated procreation and helped ensure economic stability for the (growing) family. The primary expectation of husbands was to provide the basic necessities of life for wives and children via hard work and suppression of vice; chastity and duty were the primary expectations of wives. By today's standards, those circumscribed expectations seem very low indeed. Today, in our society, partners in a relationship typically expect marriage to be the

primary source of intimacy, support, and companionship. Thus, expectations of marriage have moved from duties and sacrifices toward personal satisfaction (sexual, social, leisure, and so on).

As only fewer marriages could meet the evolving expectations, relationship dissatisfaction grew and divorces become increasingly common. As time passed, during the twentieth century, divorce overtook death as the primary terminator of marriage (Pinsof, 2002). By the end of the twentieth century, the divorce rate rose upto a staggering 2,000% during the previous 100 years. An often-quoted statistic is that roughly 50% of first marriages will end in divorce and that this rate was growing. In fact, it appears that the divorce rate has declined, with first marriage dissolutions hovering around 43–46% across the past decade (Schoen & Standish, 2001; Schoen & Canunda-Romas, 2006). Nevertheless, divorced people typically try again: the rate of first remarriage is approximately 75%, yet the rate of divorce for second marriages is about 60%. Currently, it has been estimated that nuclear families containing the original mother, father, and children constitute only about a quarter of the American households; another 25% of the households are step families; and the remaining households do not contain two parents; rather, they are made up of single-parent families, singles in groups, and same-sex adults. Increases in cohabitation also obscure actual trends in family stability (Centers for Disease Control and Prevention [CDC], 2007; Raley & Bumpass, 2003). Broken marriages result in increased risks that their children will divorce and that the children, along with their parents, may suffer significant psychological adjustment problems during, and sometimes long after, the event (Amato & DeBoer, 2001).

Unfortunately, increases in marital conflict and divorce levy an enormous toll on children, families, and society more broadly. Relationship problems are among the most difficult problems adults face and, in the course of marital conflict and dissolution, partners suffer with depression, anxiety, drinking problems, physical problems and medical disabilities, and so on. Children who live in homes where parents' marriages are distressed also demonstrate increased psychosocial adjustment problems, marked by significant elevation in internalizing symptoms (e.g., depression, anxiety) and externalizing symptoms (e.g., conduct problems, acting out).

In recognition of the corrosive effects of marital distress on the emotional and physical well-being of adults and children, there has been a societal movement of sorts to preserve marriages. As an example, for more than a decade, the Smart Marriages Conference has been held annually and brings together over 2,500 marriage educators, therapists, sociological and clinical researchers, and married partners who are dedicated to enhancing the prevalence, the stability, and the quality of marital relationships. The overarching philosophy of the conference is that healthful marriage serves as an important protective factor against the problem described above; the evidence for this is rather compelling. Let us consider a few of the salient findings: (a) in general, women and especially men and children enjoy relatively better mental and physical health benefits being in versus out of the state of marriage (CDC, 2007; Myers, 1999); (b) men and especially women and children benefit socioeconomically from being in versus out of marriage (CDC; Ross, Mirowsky, & Goldsteen, 1990); and (c) research indicates that, with the exception of marriages that include high conflict or high abuse, the divorce process itself generally has negative short-term and long-term health and economic consequences for both adults and children, compared to families that stay together (Amato, 2000). Therefore, it is increasingly clear that there are many positive benefits in staying married and attempting to improve the function and quality of the adult intimate relationships.

These findings set the stage for the development of primary, secondary, and tertiary interventions designed to promote marital health.

Accordingly, from a societal perspective, given the mental, physical, and socioeconomic well-being implications for its members, marital therapy constitutes an important area for clinical psychology to pursue. As such, beginning nearly 40 years ago, clinicians and researchers alike have developed and tested theories and interventions to help those seeking help for problems in their marriages (Azrin, Naster, & Jones, 1973; Weiss, Hops, & Patterson, 1973).

The purpose of this chapter on marital dysfunction is to provide a fairly comprehensive overview of the major existing psychological approaches that have been developed over the past 4 decades to conceptualize and treat distressed relationships. Conventionally, authors interchangeably use the terms marital therapy, marriage therapy, and couple therapy. Couples may seek therapeutic assistance on their own or be referred for evaluation and treatment options by a variety of health care providers, community contacts, friends, and relatives.

13.2 Recognition of Symptoms and Their Assessment

13.2.1 Description of the Disorder

The *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-IV*; American Psychiatric Association [APA], 1994, p. 681) includes v61.1, Partner Relational Problem, "when the focus of clinical attention is a pattern of interaction between spouses or partners characterized by negative communication (e.g., criticisms), distorted communication (e.g., unrealistic expectations), or noncommunication (e.g., withdrawal) that are associated with clinically significant impairment in individual or family functioning or the development of symptoms in one or both partners." Typically, individuals displaying symptoms as indicated above have an adjustment disorder, which, according to *DSM-IV,* is the development of emotional or behavioral symptoms in response to an identifiable psychosocial stressor(s) occurring within 3 months of the onset of the stressor(s) (APA, p. 623). For couples, the unnamed stressor may be marital conflict. The *DSM-IV* further codifies adjustment disorders according to specific types of symptom expression (e.g., adjustment disorder with depressed mood, anxiety, disturbed emotions or conduct). Additionally, certain couples may experience other *DSM-IV*-identified problems related to abuse, such as physical or sexual abuse of adults. Within marriage, the former is exemplified by spouse beating, the latter by sexual coercion or rape (APA, p. 682). Moreover, there is no doubt that marital distress can be either the cause or the result of any number of major psychological disorders experienced by partners or other family members. These problems include, but are not limited to, depression, anxiety, substance abuse, personality disorders, and chronic medical problems.

Ideally, one day there will be a single standardized "diagnostic system" for marital dyads. Such a system also would indicate the most appropriate method of treatment for a given couple. At present, such a standardized diagnostic system is far from reality, even though the field of marital therapy is increasingly embracing integrationist and couple-oriented perspectives. Nevertheless, given the practical challenge of being clinically competent in the practice of all types of approaches, most therapists end up learning well one, or possibly two, basic approaches.

In practice, what is assessed and how it is assessed tend to be heavily influenced by the interviewer's theoretical orientation and the couple's presenting problems. For example, marital

therapists who are more traditional, psychodynamically oriented, or emotion-focused may rely exclusively on the interview method for history-taking assessment information. In comparison, behaviorists, as well as certain strategic family therapists, may de-emphasize history-taking and instead focus on here-and-now interactions. Moreover, the so-called brief treatment family therapists may employ only a short problem-focused assessment interview and then proceed with strategic interventions within the first hour of contact.

13.2.2 Procedures for Gathering Information

Couple therapy, particularly those from a social learning, cognitive-behavioral approach, has a widely recognized tradition of beginning the relationship evaluation process by employing three interrelated methods of gathering information in order to understand the problems and strengths of a given relationship and plan various interventions to accomplish the therapeutic goals. First, there are a series of semi-structured and unstructured clinical interviews, typically conducted over the course of two to four sessions, which often include separate interviews with each partner, as well as meeting the partners together in a conjoint format. In general, the objectives of these assessment interviews are to: (a) screen clients for the appropriateness of couple therapy; (b) determine the nature and course of events related to partners' presenting complaints; (c) determine the expectations and goals of the partners for couple therapy; (d) establish an effective therapeutic relationship; and (e) orient the couple to the therapist's orientation and approach to treatment.

Each partner has one or more reasons for initiating couple therapy. Very often, in the first meeting, the therapist will help the partners to develop a problem list, which indicates each person's perception of the problems in the relationship. Problems can be categorized into matters of *content* and *process*. Problematic content areas often include specific stresses that adversely affect the marriage, such as unemployment, disrupting external events, finances, sex, in-laws, and children-rearing problems, annoying personality traits, and managing mental or physical illnesses. Process concerns have to do with couple adaptive processes or *how* the couple interacts. Typical complaints include ineffective ways of communicating with one another and concerns regarding how they attempt to solve problems and manage relationship disputes.

Additionally, it is also important during the evaluation stage to ascertain the partners' respective goals and expectations for couple therapy. For example, are they both committed to the relationship or is one partner planning separation or divorce? Are the problems identified negotiable for both partners? Are their goals and expectations realistic given the partners' levels of competence and motivation? Before making a treatment plan, all these interpersonal competence and motivational issues must be considered. Finally, the initial interviews allow for the therapist to establish a therapeutic relationship with the couple. The therapist must possess sufficient credibility, gain trust, and offer hope that the partners' pain, suffering, dissatisfaction, and distress can be addressed effectively. If this step is not accomplished, the couple may not engage in the therapeutic process.

One way to aid in the accomplishment of this preliminary bonding is to explain in advance the purpose and value of the various evaluation and intervention procedures. What is expected from the clients? What are the roles and responsibilities of the therapist? How will information be gathered and what is the prognosis for resolving their problems?

Second, a common assessment procedure used to gather diagnostic information about the couple is the administration of various self-report questionnaires and inventories to learn more about specific strengths and problem areas for each couple. Indeed, several standardized questionnaires have been designed to assess one or more of the following variables: global relationship satisfaction; communication skills and deficits; areas of change requested by the partners; types of conflict; intensity levels of conflict and styles of conflict resolution; partners' cognitions, expectations, and beliefs about the relationship that may be causing problems; sexual function and dissatisfaction; participation in pleasurable events and rewarding social activities; and steps toward divorce (for a discussion, see Fals-Stewart, Birchler, & Ellis, 1999). Practitioners typically ask the couple to complete a selected set of instruments either before or at the very beginning of the evaluation process. In most cases feedback and interpretation of the results are given to the couple regarding their responses.

The third assessment procedure that is routinely conducted is observation and analysis of a sample of in vivo marital conflict resolutions. That is, couples are helped to identify an existing issue about which they have disagreement; they are asked to spend 10–15 min in the session talking together in a demonstration of just how they go about attempting to resolve the problem. The therapist may or may not leave the room to less obtrusively observe and/or videotape the communication sample for later review and analysis. The conflict resolution communication sample provides unique and important information regarding the level of problem-solving skill the couple possesses to resolve relationship conflicts and the extent to which improvement in these adaptive processes will become treatment goals. In addition to the development of complex and sophisticated couple interaction coding systems (Backenstrass et al., 2007), several investigators have developed and employed a simple therapist coding system to quantify a given couple's communication and problem-solving skills (Basco, Birchler, Kalal, Talbott, & Slater, 1991; Heyman, Weiss, Eddy, 1995).

In summary, the multi-method assessment procedures employed by many couple therapists provide a solid basis for describing a couple's presenting problems and relationship strengths. The procedures provide both converging and diverging types of information that are used in a systematic manner to conceptualize relationship (dys)function and to formulate a treatment plan.

13.2.3 Additional Assessments Required

Broadly speaking, beyond the basic relationship assessments described above, there is often a need for additional evaluation to determine the nature and severity of other concomitant problems that often accompany relationship distress. For example, even though the couple is presenting for marital dysfunction, one or both partners may be suffering sufficiently from individual problems such that additional assessments regarding these problems may be indicated. These individual problems include, but are not limited to, drinking and other drug abuse, significant affective or anxiety disorders, dementia, psychosis, disabling medical problems, and posttraumatic stress disorders. When present, these clients may need specialized psychodiagnostic testing or mental status examinations performed by the couple therapist or via referral to another clinician. Second, certain problems identified in the form of couple problems may require additional assessments beyond the typical and standard evaluation procedures. Common examples here include the presentation of intimate partner violence issues, in

which safety and behavior control assessments need to be made; the assessment of children, when parenting conflicts or child behavior problem issues are primary; and evaluation of sexual dysfunction, when complex sexual problems are encountered. For a given couple, problem-specific inventories and additional interview-based diagnostic sessions may be required to complete a comprehensive diagnosis of marital dysfunction.

13.3 Maintenance Factors

13.3.1 Conceptual Models for Understanding Couple Relationships

Recently, a number of researchers and theoreticians who examine marriage and relationship functioning have offered certain conceptual schemes and heuristic models for understanding the factors that influence and determine the functional status of a couple relationship (Bradbury, Fincham, & Beach, 2000; Epstein & Baucom, 2002; Halford, 2001; Karney & Bradbury, 1995). Taken together, these models suggest that the quality of a couple relationship, at any point in time, is a function of the interaction and adaptation of two individuals. They bring into the relationship their own developmental and personal characteristics, they are significantly influenced by the cultural contexts from which they came and in which they live currently, and they must cope with life events and environmental factors that demand acceptance or changes of them.

Birchler, Doumas, and Fals-Stewart (1999) have offered a behavioral-systems framework for evaluating couple dysfunction called "The Seven Cs" (7Cs). During the course of diagnostic interviewing and treatment planning, clinicians may well seek to learn about a given couple's relative strengths and areas for improvement according to these areas of function: Character features, Cultural and ethnic factors, Contract, Commitment, Caring, Communication, and Conflict resolution (Cole, 1989; Levenson, Carstensen, & Gottman, 1993; Nichols, 1988; Wynne, 1984).

Briefly, we will define the 7Cs and note some concepts underlying these domains of personal and interpersonal function as they relate to being in a couple relationship. These concepts link to the assessment procedures described above and the intervention procedures, which will be described in following sections. First and foremost, we are concerned with the (inter) personal abilities and emotional qualities of the two individuals attempting to create the relationship. In our framework, *Character features* refer to the aggregate of features and traits that form the individual nature of a person. On one end of the continuum of the potential for interpersonal intimacy is an individual who, by virtue of often complicated bio-psychosocial misfortune, has certain handicaps, personality traits, emotional vulnerabilities, and perhaps such limited or pathological personal resources such that she or he is not a good candidate for marriage. On the other end of this continuum is the individual who is capable of loving well, in the broadest sense. She or he is responsible, resourceful, adaptive to varying and stressful circumstances, able to consistently give and get positive responses, and can achieve a healthy and functional balance of independence and interdependence in the relationship. In this domain, theoretical factors relating to individual development, the course of mental illnesses, mate selection, and attachment theory are important considerations for clients with marital dysfunction.

Cultural and ethnic factors refer to the cultural, ethnic, racial, religious, family of origin, socioeconomic, and other societal variables that collectively form the past and present context

in which individuals and couples exist. Certainly, given these important and broad developmental and contextual parameters, many adjustments by the couple are required and the potential exists for many types of conflicts to occur, both between the partners and between the couple and extended family or the community. In this domain, considerations of cultural diversity, the impact of family of origin issues (i.e., family systems theory), and role preferences and role strain are relevant.

As applied in this framework, the notion of *Contract* comes from mate selection theory, family systems theory, and social exchange theory. The contract between the partners may refer to explicit agreements between the two for the doing or not doing something specified and expected. However, in marital relationships, this is more often a complicated set of implicit expectations which partners have concerning how they will define the relationship and interact with another. In or out of awareness, contract problems suggest that partners' expectations do not match their experiences and due to which significant dissatisfaction and conflict may result.

Commitment is thought of as the state of having pledged, devoted, or obligated oneself to another; to be involved, remain loyal, and maintain the relationship over time. It has been said that virtually all approaches to the treatment of marital dysfunction can be successful if the partners are committed to one another. In contrast, when partners are not committed the prognosis for improvement is poor. This is a complicated interpersonal variable and can cause much distress within a couple. We attempt to simplify it conceptually by being concerned with two or three aspects. First, are partners committed to stability (e.g., no threats or behavioral steps toward separation or divorce; no intention of leaving their partner)? Second, are both partners committed to quality, that is, are they willing to invest in a process to improve the relationship through involvement and collaborative work? In the absence of these levels of commitment, prognosis is once again poor regarding the remediation of marital dysfunction.

Caring, obviously an important element of an intimate relationship, is grounded in social learning theory in our approach. We refer to the ability to express and exchange relational behaviors that are designed to promote emotional and physical intimacy, including mutual affirmation, support and understanding, demonstrations of affection, and sexual activities. Also, partners need to establish an effective balance between other-care and self-care regarding the experience of pleasant events and sources of reinforcement and validation.

Communication is conceptualized and known to be a core effective intervention element of BCT. We define communication as the open and honest sharing of information between two people, when the messages intended and sent by the speaker are exactly the same as the messages heard or received by the listener. The analysis of observed couple communication and communication training are usually critical to the remediation of marital dysfunction. A number of assessment procedures exist and training manuals have been developed to assist distressed couples to improve in the area of the number one complaint of couples seeking therapy.

Finally, the last of the 7Cs, *conflict resolution* refers to the personal skills and interpersonal patterns of interaction that facilitate effective decision making, individual and joint problem solving, the management of anger, and the resolution of marital conflict. Once again, assessments and interventions related to the skill of problem solving and conflict resolution are core elements of an empirically validated cognitive-behavioral approach to the remediation of marital dysfunction. The notion is that people are often deficient in the skills of problem solving, anger management, and conflict resolution and that, given the proper

motivation to improve the relationship, couples often can make significant improvements in this important domain of couple function.

13.3.2 Summary of the 7Cs

Most of the ingredients important to a long-term intimate relationship can be accounted for by an analysis of the 7Cs. For many couples, these domains of function constitute strengths to build upon or goals to strive for: (1) socially compatible personal values and a healthy personality (i.e., character); (2) strong family traditions and compatible or stimulating cultural and ethnic backgrounds; (3) a marital contract that offers ongoing adaptations and a viable match between partners' expectations and experiences; (4) loyalty to the marriage with a long-term perspective and the ability and desire to work out the inevitable problems (i.e., commitment): (5) love, affection, emotional support, and an optimal balance of individual and mutually rewarding activities (i.e., caring): (6) open and effective communication; and (7) problem-solving and anger management conflict resolution skills.

13.4   Evidence-Based Treatment Approaches

There is a number of accepted approaches to the conceptualization and treatment of marital distress. Suffice it to say that there are many practitioners of these approaches and they have been active over many years and have varying degrees of empirical support. The seven approaches described below are discussed generally in chronological order according to their development, although some programs were developed during similar time periods. All are recognized clinical programs designed to treat distressed intimate relationships.

Problem-Focused Couple Therapy. As perhaps the oldest and most widely applied approach to couple distress, problem-focused couple therapy (PFCT) has been known by several names over the years. The literature still offers descriptions of these family systems theory-based programs under the following labels: brief strategic couples therapy (Shoham & Rohrbaugh, 2002), structural strategic marital therapy (Keim & Lappin, 2002), and short-term structural family therapy with couples (Nichols & Minuchin, 1999). The basic tenet of PFCT is that dyads, like families, operate according to family systems rules and interactive processes. A distressed couple, therefore, is caught up in a negative cycle of interpersonal interactions, and the partners' efforts to solve the problems ironically tend to maintain them. The approach is nonpathologizing, seeking to avoid use of individual diagnostic labels. Rather, PFCT is sensitive to the normal family processes associated with the family life cycle and how distressed families (and couples) fail to adapt successfully to a number of inevitable family transitions (Carter & McGoldrick, 1988). The goal of PFCT is to focus on the primary problem offered either by the couple or imputed by the therapist and facilitate a solution in the most efficient way possible. With the exception of abuse, problem behavior is often viewed as being motivated by underlying desires to help or protect loved ones. As an example, nagging can be conceptualized as one's attempt to help another do the right thing. To the extent that nagging makes the problem (e.g., partner withdrawal and refusal to discuss an issue) worse, the couple gets caught in a self-fulfilling vicious cycle that results in circular causality. That is, the more one nags, the more the other resists compliance, and so on.

Interventions in PFCT relate to identifying both the interactional sequence that is causing the couple distress, as well as a preferred interactional sequence. Sessions with the therapist and homework assignments are thus devoted to disrupting the faulty sequence and reinforcing the preferred one. PFCT therapists are quite directive and often use strategic instructions to get couples to alter their problematic interactions. For example, in a case where a couple is incessantly arguing several times a day, the therapist may suggest that the arguments suggest a passionate connection to one another and a struggle to improve the relationship. The partners may be instructed to save their exuberant energy, prepare their arguments, and plan to argue for a full hour between 5 and 6 p.m. every day. Such a directive has the potential to put the couple in a therapeutic paradox, sometimes called a therapeutic bind, such that no matter what they do with respect to this assignment, the dysfunctional system can be altered. In this example, if the couple complies with the directive, participants end up arguing much less frequently and thus less destructively than before. If the couple fails to comply and does not argue between 5 and 6 p.m. daily, the therapist can work with them to determine how they avoided arguing then and apply that strategy to other periods in the day.

PFCT is a "here-and-now" approach; there is very little attempt to understand the origins or causes of the presenting problems. Moreover, insight is not viewed as required to resolve the existing interactional problems. Typically, there is no emphasis on structured communication or problem-solving skills training. The therapy is brief and typically fewer than ten sessions. Some interventions may be straightforward, even psychoeducational in nature; others may be quite strategic and use what might be viewed as gimmicky or tricky suggestions designed to trigger a change in the family systems process that is dysfunctional. PFCT was very popular during the 1960–1980s, but its use has waned in the past 2 decades, perhaps in large part due to the emergence of both derivative and alternative therapies that have broader appeal and more empirical support.

Insight-Oriented Couple Therapy. In his development and description of insight-oriented couple therapy (IOCT), Dicks (1967) adapted the Sullivanian psychoanalytic object relations theory for understanding couple dynamics. Dicks' contribution was to describe how two personalities in a marriage unite not just at the level of conscious choice, compatibility, and sexual attraction, but also at the level of the unconscious, where the personalities match but the couple is unaware. Partners are attracted to one another to complete or work through prior intrapsychic conflicts via the relationship. In an unhealthy marriage, the match fails to unlock and resolve constructively inherent intra-individual repression and consequently deepened unconscious and conscious conflicts ensue.

IOCT is a developmental approach that creates a therapeutic environment in which the couple's pattern of defenses can be displayed, recognized, and analyzed until the underlying anxieties can be identified, explored, and experienced at the conscious level. Basic interventions include: (a) *setting the frame*, which means establishing the environment, ground rules, and parameters of therapy (e.g., number and length of sessions, therapist structure of activities in the sessions, setting of fees, and other expectations); (b) *creating psychological space for understanding* by containing the couple's anxieties at the outset and fostering exploration and disclosure over time; (c) *listening to the unconscious*, observing conscious and exploring unconscious communications between the partners and between partners and the therapist; (d) *following the affect* because moments of emotion provide access to the unconscious; (e) *observing transference and countertransference*, that is, partners' feelings about the therapist and the therapist's feelings about the partners also can provide clues to the unconscious

conflicts; and (f) *interpretation of the defense*, which constitutes pointing out the recurring patterns of interaction that serve a defensive purpose and may be subject to insight, understanding, and revision for the health of the relationship. The goals of treatment are relatively vague compared to other approaches because of the variable and unknown nature of the disruptive unconscious processes at the outset of therapy. Accordingly, IOCT may be open-ended and long-term in nature (Scharff & Bagnini, 2002).

Despite the long tradition of psychoanalytic and psychodynamic theory and practice in the field of individual psychotherapy, it was not until approximately 1989 that an organized IOCT was actually favorably compared to behavioral marital therapy (BMT) in an empirical study of therapeutic outcomes (Snyder & Wills, 1989). When introduced, the IOCT approach described by Snyder and Wills was much less psychoanalytically oriented than previous approaches. More recently, Snyder and Schneider (2002) have described a pluralistic, developmental approach to marital therapy called Affective Reconstruction. This approach incorporates insight-oriented interventions designed to address the notion that couples' difficulties often derive from previous relationship injuries that cause sensitivities and interpersonal vulnerabilities within and between the current partners. Effective therapy helps partners to depersonalize the negative aspects of their interactions and be better able to empathize with the origins of one another's sensitivities and their disruptive influences. An emphasis is placed on identifying, understanding, and possibly modifying partners' maladaptive interpersonal schemas and relationship dispositions. Certain behaviors and thinking styles that may have served the individuals well in previous relationships (i.e., in families of origin or prior adult intimate relationships) may not be working well in the present relationship. The pluralism attributed to this approach suggests that some couples may benefit from structural, behavioral, and cognitive interventions (described elsewhere in this section) offered either before or during the insight-oriented interpretive work.

Behavioral Couple Therapy. Originally called BMT and now called behavioral couple therapy (BCT), the behavioral approach originated in the late 1960s and continues to be one of the most widely used forms of partner-involved therapies for distressed couples. BCT is founded on social learning theory, which posits that people will be attracted to partners and situations that are socially rewarding and they will be unhappy with partners and situations that are not rewarding or are punishing. Accordingly, early studies investigated the operant conditions, social reinforcement situations, and partner behavioral exchanges that differentiated happy from unhappy couples (e.g., Birchler, Weiss, & Vincent, 1975; Gottman, Markman, & Notarius, 1977). By 1980, two classic treatment manuals describing BCT were available, incorporating extensive empirical support for the approach (Jacobson & Margolin, 1979; Stuart, 1980).

Basically, two interventions were proven to be related to the status of, and improvement in, relationship satisfaction: (1) communication and problem-solving skills training, and (2) behavioral exchange. Communication problems are the most commonly cited complaint of couples seeking therapy. Effective communication is the major tool that couples possess (or do not possess, as the case may be) to address virtually all the problems that arise in their relationships. During the past several decades, evolving from the observation of thousands of conflict resolution communication samples, speaker–listener interventions have been developed systematically to help unhappy couples communicate more effectively. Acquisition, development, and practice of these skills alone were found to reduce the divorce rate by half for newly married couples during 5-year periods (Markman, Renick, Floyd, Stanley, & Clements, 1993). Together with basic communication effectiveness, problem-solving skills were also found to

discriminate between distressed and nondistressed couples. Along with the processes of effective communication and problem solving, behavioral exchange was found to be the second factor that differentiates happy from unhappy couples. Nondistressed couples emit and exchange more positive behaviors; distressed couples engage in more negative behavioral exchanges. Accordingly, in the application of BCT, couples are taught to take inventory of the various behaviors expressed in their relationships and how to negotiate and compromise toward more rewarding (i.e., desired) behaviors and how to eliminate (or at least reduce) undesired behaviors.

Hallmark characteristics of BCT include teaching partners to (a) focus on the present and not the past, (b) make positive and specific requests versus generalized negative complaints, (c) initiate and reward self and partner change, and (d) seek compromises for the good of the relationship. BCT typically consists of 12–16 conjoint sessions, accompanied by standardized assessment measures administered before and after therapy. A three- to four-session evaluation period is followed by 2–3 months of weekly psychoeducational sessions. Therapists are structured and directive, plan certain activities for the upcoming sessions, employ instruction, modeling, coaching, and typically make extensive use of weekly homework assignments and bibliotherapy to augment the consultation activities in the sessions. To a greater or lesser extent, all BCT interventions are designed to enhance couple communication and problem solving and improve the quantity and quality of behavioral exchanges. Often booster or follow-up sessions are offered to couples to help them to maintain treatment gains over time.

Cognitive-Behavioral Couple Therapy. Soon after BCT reached considerable stature by 1980, several behaviorists hypothesized that the effectiveness of BCT could be enhanced by taking into account not only partners' behaviors and responses to them, but also their manner of thinking about relationship events. When certain interventions designed to assess and modify partners' cognitions were added to the BCT technology, the combined approach came to be known as cognitive-behavioral couple therapy (CBCT). As partners react to specific events in their relationships (positive or negative), studies determined that each partner has a unique set of *selective attention* factors (e.g., Beck, Rush, Shaw, & Emery, 1979), *attributions* (beliefs about the causes for, and/or meanings of, events; Epstein, 1985; Holtzworth-Munroe & Jacobson, 1985), and *expectancies* (partners' explanations for present and future behaviors based on their past experiences; e.g., Fincham & Bradbury, 1989). Moreover, partners were found to have broad relationship beliefs (for better or for worse) that involve one's *assumptions*, which are beliefs about the characteristics of individuals and intimate relationships and *standards*, which are an individual's core beliefs about how things should be (e.g., Baucom, Epstein, Sayers, & Sher, 1989). Taken together, these cognitive styles can be powerful determinants of one's experience and behaviors expressed in an intimate relationship. Based on a fairly large and growing body of empirical research, distressed partners have been found to possess significantly more faulty cognitions, about themselves, their partners and their relationships than their nondistressed counterparts (Baucom & Epstein, 1990).

CBCT incorporates an assessment of partners' cognitions that may be detrimental to a given relationship, while also taking account of behavior change options as in the case of BCT. After helping partners to recognize their self- and relationship-defeating cognitions, various interventions are employed, such as cognitive restructuring, monitoring and testing assumptions, and helping men and women explore and be open to, and curious about, the cognitive structure of one's partner. Mutual understanding of the complexity of one another's thinking patterns, cooperative efforts to eliminate or reduce the effects of unfavorable cognitions, and

mutual efforts to enhance a pro-relationship set of expectations and experiences constitute the core CBCT interventions. Well-developed CBCT treatment manuals are available, which provide rich descriptions of the theoretical foundations for CBCT as well as components of the intervention that apply to distressed couples (Baucom & Epstein, 1990; Epstein & Baucom, 2002).

Solution-Focused Couple Therapy. Also in the early 1980s, a number of family system therapists began to diverge from the traditional PFCT formulation (see earlier) and focus specifically on a strength-based, solution-focused brief therapy approach to couple distress (e.g., de Shazer, 1982; Lipchik, 1988). The basic conceptualization of relationship problems in solution-focused couple therapy (SFCT) is that distressed couples are: (a) locked into a negative mindset, (b) are stuck in problem talk, (c) have inherent strengths but are not seeing or utilizing them, and (d) are not noticing the exceptions to when the problem occurs. In SFCT, problem talk is completely discouraged; the goal is to help the couple identify and co-construct active solutions to the problem. Solutions are found in the exceptions to the problematic behavior (i.e., what is happening when the problem behavior is not occurring). Similar to its parent approach, PFCT, there is no attempt to pathologize partners or dyadic processes, no interest in the development or origins of the problem, and usually little emphasis on structured communication or problem-solving skills training.

Language is a primary tool in this therapy: changing problem talk to solution talk. There are several standard techniques associated with SFCT. The *miracle question* asks partners what it would be like if a miracle happened overnight and the problem was gone; what would each partner notice, how would they behave differently, and so on. Based on the answers, experimental behavioral assignments are made. *Scaling questions* ask, for example, on a scale of 1–10 how committed are you to this marriage; how happy are you with this behavior, how happy are you in this relationship. Whatever the partners' answers, the therapist asks what it would take to get to the next level. *Exception seeking* consists of asking the couple when the problem does *not* occur. The answers are examined for determinant situational factors and attempts are made to apply these to the problematic behaviors and situations.

In SFCT, as in PFCT, the therapist is not an expert, but rather acts as a collaborator who helps the couple to co-construct solutions to their problems. The therapy is brief, sometimes lasting only one to two sessions, and rarely more than ten. Termination occurs when the clients are satisfied that their goals have been achieved. A treatment manual was developed for this approach that attempts to enhance the basic SFCT approach with certain integrative features, such as a focus on the role of emotions in the therapeutic relationship (see Lipchik, 2002).

Emotion-Focused Therapy. For many years, the role of affect in marital distress was downplayed or seen as secondary to the primary effects of behaviors (BCT), cognitions (IOCT and CBCT) or principles of family systems (PFCT and SFCT). However, more recent integrative approaches to the treatment of couple distress now include intervention components designed to account for the role that *emotion* plays in the development and resolution of dyadic difficulties (see Epstein & Baucom's enhanced CBCT, 2002; Jacobson & Christensen's integrative behavioral couple therapy, 1998; Snyder & Schneider's affective reconstruction couple therapy, 2002). However, some of the most definitive work to offer primacy for emotions began to be published in the late 1980s under the programmatic title emotion-focused therapy (EFT; Greenberg & Johnson, 1988). The authors suggest that EFT is integrative in that the approach incorporates experiential/gestalt principles and family systems theory influences. However, it should be noted that EFT is not a behavioral approach.

Over the years, attachment theory has taken a more central place in the conceptualization and practice of EFT (Bowlby, 1988). In every relationship, attachment behavior is aimed at maintaining closeness and contact with other people while simultaneously striving for individuality. Just as in their families of origin, adults can form secure or insecure attachments with their partners. Due to problems in attachment, individuals hide their primary emotions (i.e., sorrow, sadness, inadequacy, shame) and exhibit secondary or "reactive" emotions (i.e., frustration, anger, or fear). Based on the expression of secondary (sometimes called *hard*) emotions, negative interaction patterns begin to shape the relationship. According to EFT, these emotions organize and drive the couple's interactions, not their cognitions or behaviors. Distressed couples have failed to successfully express their emotions and partners feel invalidated and misunderstood. EFT is designed to help each partner to access this emotional pain and successfully express their primary (often called *soft*) emotions, while the listening partner is taught to be open, empathetic, and supportive of the other. The goals of EFT, with the therapist playing a fairly directive and strongly collaborative role, are to expand constricted emotional responses, identify and restructure negative interactions, and establish new solutions while fostering positive cycles of comfort and caring. The majority of the couple's emotional work takes place in the sessions and there is almost no use of homework. Therapy typically lasts from 18 to 20 sessions, unless there has been a major attachment injury experienced by either partner, in which case therapy may take much longer. Treatment manuals have been published for EFT (Johnson, 1996, 2002).

Integrative Behavioral Couple Therapy. Integrative behavioral couple therapy (IBCT; Jacobson & Christensen, 1998) grew out of the BCT tradition, but was designed specifically for those couples who seemed to benefit the least from BCT, namely, those who were most distressed, most rigid, had divergent relationship goals, or were emotionally distant. In short, IBCT was designed for couples who no longer had a "collaborative set," an ability to work together as a team to create personal and relationship change.

IBCT is based on the theory that relationship distress develops through a process in which normal interpersonal differences become viewed as deficiencies. All partners ask each other for occasional behavioral change, but when ongoing attempts are fruitless, differences are eventually vilified. For example, a spouse is no longer "easygoing" but has become "lazy and uncaring." Over time, repeated unsuccessful efforts to change each other lead partners to become increasingly entrenched in their own behavior patterns, or "polarized," creating a "mutual trap" in which both partners feel stuck in the pattern, helpless to change it, and blaming each other. IBCT relieves relationship distress and helps couples to create a collaborative set by improving understanding of the polarization process and increasing emotional understanding, acceptance, and tolerance of differences.

After an extensive relationship assessment, IBCT therapists identify the theme behind a couple's polarization process. This theme is typically one of fundamental differences in personality, values, or needs (e.g., desired closeness/distance or amount of responsibility/organization) that have usually been present since the beginning of the relationship. The therapist provides feedback to the couple presenting a formulation consisting of their individual theme, polarization process, and mutual trap; from this evolves a treatment plan.

Although traditional BCT techniques may be used, the primary emphasis in IBCT is on nondidactic acceptance-based interventions. These include: (a) *empathic joining*, which breaks the mutual trap by increasing emotional closeness through the disclosure of softer, more vulnerable emotions; (b) *unified detachment*, which focuses on seeing relationship problems as

an "it," a pattern that the couple engages in, rather than a "you," something one partner deliberately does to the other; and (c) *tolerance-building*, which prescribes exercises that help partners cope with individual differences that they may never like, but are not "deal breakers." In building tolerance, partners are not taught to tolerate abusive or significantly inappropriate behaviors; rather to become less frustrated with partners' personal styles or behaviors that may be unlikely to change. Although IBCT is a relatively unstructured therapy with significantly less emphasis on changing specific behaviors than in BCT, the emphasis on acceptance often leads to change. Paradoxically, when partners no longer feel pressured by the other to change, they are more likely to engage in the initially desired behaviors. Recent clinical trials of IBCT support its effectiveness in treating relationship distress (Christensen et al., 2004; Christensen, Atkins, Yi, Baucom, & George, 2006).

13.4.1 Marital Therapy Outcomes

To date, the only couple therapy modality for relationship distress with extensive empirical support is BCT (Chambless & Hollon, 1998; Powers, Vedel, & Emmelkamp, 2008). This is partly because BCT is the oldest and by far the most studied of the couple therapy modalities. Newer treatments that have increasing empirical support include emotion-focused therapy (Byrne, Carr, & Clark, 2004), IOCT (Snyder, Wills, & Grady-Fletcher, 1991), integrative BCT (Christensen et al., 2004), and CBCT (Epstein & Baucom, 2002). On average, couple therapy has effect sizes ranging from 0.50 to 1.30 for the treatment of relationship distress (Snyder, Castellani, & Whisman, 2006), indicating a moderate to large effect of treatment compared to no-treatment control conditions. As described above, couple-based treatments for co-occurring relationship distress and individual difficulties have also been examined and found to be effective in several areas, including substance abuse (Fals-Stewart, O'Farrell, Birchler, Cordova, & Kelley, 2005) and depression (Beach & Gupta, 2003).

However, not all couples respond to treatment. Research demonstrates that only 50–60% of couples experience significant gains as a result of couple therapy, and not all of those are able to maintain their gains long term (Jacobson, Schmaling, & Holtzworth-Munroe, 1987; Snyder et al., 1991). As a result, there is an increasing emphasis on studying the mechanisms of change in couple therapy and the predictors of response to treatment (e.g., Doss, 2004; Snyder et al., 2006). The future of couple therapy research seems to lie in determining what works best for which people with what problems and why, as much as in developing new theoretical approaches and treatment modalities (Christensen, Baucom, Vu, & Stanton, 2005).

13.5 Mechanisms of Change

At this point in the empirical literature on couple therapy, however, far greater emphasis has been placed on the evaluation of whether or not it works, rather than *how* it works. Yet, various schools of couple therapy have theoretical mechanisms of therapeutic effect that are believed to underlie the outcomes observed. For the cognitive-behaviorally oriented couple therapy approaches, it is believed that the learning of new healthful behaviors and modification of unrealistic expectations leads to more positive partner exchanges and less relationship conflict.

These schools of couple therapy are primarily skill-based teaching approaches in which a therapist teaches more effective relationship behaviors. These include training in communication skills, problem solving, negotiation, and contracting. These skill-based elements are often augmented with various cognitive interventions, such as identification of unrealistic expectations of the relationship and/or the partner and replacement with more realistic beliefs (e.g., Baucom & Lester, 1986).

IOCTs theorize a different set of change mechanisms. These intervention approaches promote increased insight into the conflicts, any cycles that might maintain them, and the emotional process that maintain the relationship distress. Therapists using this framework try to facilitate insight for each of the partners into his or her own personality and behavior as well as the dynamics of the partner's relationship.

However, are the theorized mechanisms of change *actually* those that lead to improvements? As with individual psychotherapy, there is much controversy as to what actually brings about change in couple therapy (Simon, 2006; Sprenkle & Blow, 2004). Is it the "specific ingredients" of the interventions or the "common factors" that can be found in virtually all successful therapies? "Specific ingredients" refer to clearly identified circumscribed techniques that are elements of a given couple-based intervention package. These might include techniques such as communication skills training, cognitive reframing, empathic listening and responding, and so on. In many situations, these techniques are operationalized in detailed therapy manuals to which clinicians adhere to achieve a particular outcome. In many important respects, the notion that implementation of specific ingredients is conceptually akin to a pharmacotherapy model of psychotherapy in which a well-described psychotherapeutic technique is administered to produce a desired psychological or behavioral outcome, is much like administering a pill to produce a desired changed in physical state.

Conversely, different couple therapy approaches have a great deal in common with each other; these "common factors" refer to aspects of therapy that are not specific to any particular approach but are nonetheless curative. These common elements include client factors, such as motivation and expectation for change, and therapist factors such as the ability to form alliances with clients, attending to clients' needs, and creating a corrective emotional experience for clients. Indeed, it may be that the common factors themselves may account for most of the change observed in couple therapy versus specific techniques employed within a given couple intervention.

Is there any support for the notion that it is common factors and not specific ingredients that lead to change? Although not directly on point, there is some evidence that support this idea. More specifically, comparisons of outcomes of different couples therapy, compared in "horserace" randomized clinical trials, have revealed that different approaches to couple therapy produce better outcomes than control conditions, but there are few differences between active couple interventions (e.g., Dunn & Schwebel, 1995).

In individual therapy, there has been movement toward understanding change mechanisms that may transcend particular therapies (Beutler, 2003); comparative research in couple therapy has lagged behind. As cogently argued by Sexton T. and colleagues (2008), there is a great need in couple therapy research to evaluate empirically the mechanisms of action that lead to measurable positive change across intervention approaches. It is simply not clear at present how many specific ingredients and how many common factors account for observed outcomes (separately, additively, or interactively).

13.6 Basic Competencies of the Clinician

13.6.1 Overview

Although there would most certainly be a rather spirited debate about exactly what a provider who works with couples should know and understand, there are nonetheless fundamental areas of knowledge and skill or "competencies" that nearly everyone would accept as necessary, if not sufficient, for a professional therapist to achieve an acceptable level of service quality and care. Indeed, to guide training and continuing education among its constituents and other stakeholders, the American Association for Marriage and Family Therapy (AAMFT, 2004) described competencies in six core areas that they deemed all marital and family therapists must possess to practice independently:

- Decision making over admission to treatment
- Clinical assessment and diagnosis
- Treatment planning and case management
- Therapeutic interventions
- Understanding of legal issues, ethics, and standards
- Current knowledge of research and program evaluation

Certainly, each of these is very broad in scope. Within each of these primary domains, AAMFT also describes the types of skills and knowledge that marital and family therapists must develop, which are referred to as "subsidiary domains" in this scheme: (a) conceptual, (b) perceptual, (c) executive, (d) evaluative, and (e) professional. Refining the primary competencies with the subsidiary domains, AAMFT describes 128 interrelated competencies. Although it is beyond the scope of this chapter to describe all of these competencies, a broad overview of the primary core competencies provides a framework for providers who treat couples to guide self-evaluation of basic skills and the need for further training and education.

13.6.2 Brief Descriptions of Core Competencies

Decision-Making Regarding Admission to Treatment. In many important respects, the therapeutic relationship starts with the decision-making process regarding whether or not a client (whether that be an individual, couple, or larger element of the family system) should enter into some form of treatment. Such a determination for a couple therapist requires an evaluation of the appropriateness of couple therapy or other types of interventions for the presenting problem or problems, combined with an understanding of the providers' professional scope of practice and competence. In part, this involves gathering and reviewing intake information and attending to individual, familial, community, cultural, and contextual factors. Of course, the picture that evolves from this information may reveal the need for referral to specialized services or other providers. Admission to treatment also requires determining who should participate in the treatment and in what configuration (e.g., individual, couple, family, others). On a practical level, admission to treatment also involves describing to clients practice-setting rules, policies, and procedures (e.g., fees, payment, responsibility of parties, obtaining consent for parties to participate, confidentiality).

Clinical Assessment and Diagnosis. Couple therapists should have a strong knowledge base on the most prevalent behavioral health disorders (e.g., depression, anxiety, substance use, intimate partner violence), including epidemiology, etiology, phenomenology, effective treatments, course, and prognosis. Relatedly, this includes having a working knowledge of couple and family evaluation methods that are appropriate to the presenting problem and practice setting. There are a variety of assessment approaches that are often used in the course of couple therapy. As described earlier, use of structured assessments allows providers to efficiently collect information on the nature and extent of problems that a given couple may have and potentially tailor the treatment plan accordingly. Couple therapists should have some familiarity with administration and interpretation of certain standard measures of couple adjustment which include the Dyadic Adjustment Scale, Areas of Change Questionnaire, and the Marital Satisfaction Inventory – Revised. Providers should also have a sense of the advantages and disadvantages of various assessment approaches. Perhaps most importantly, a couple therapist should diagnose and assess strengths and problems from a systemic perspective. This includes describing strengths and problems from the perspective of each member of the dyad. Finally, part of the assessment and diagnostic process involves determining provider–client level of agreement on the partner's strengths, problem areas, and direction for treatment.

Treatment Planning and Case Management. Developing a treatment plan (both initial and subsequent updates) requires knowing approaches and techniques that are most effective for the problems identified during the course of assessment. Treatment planning includes such tasks as (a) developing a set of clear treatment goals, (b) structuring the intervention to meet clients' needs and facilitate systemic change, (c) potentially working in collaboration with others who have significant influence on the dyadic system (other family members, other significant persons, other providers, and so on), (d) modifying goals as treatment progresses and as necessary, and (e) developing termination and aftercare plans. Case management also includes evaluating managing risks, crises, and emergencies. This can also include assisting clients with managing complex systems of care, particularly when referral to other services may be involved. On a more practical level, couple therapists must be able to write treatment plans and other case documentation in accordance with setting rules, professional standards, and state and federal regulations.

Therapeutic Interventions. During the last 2 decades, there has been movement in the professional field toward the use of evidence-based practice (see Chambless & Hollon, 1998). There is a need for practitioners to know couple therapy models for which there is substantial evidence for effectiveness, such as BCT, insight-oriented marital therapy, functional family therapy, multidimensional family therapy, and parent–child interaction therapy (for a review, see Sexton & Alexander, 2002). Relatedly, providers should appreciate the value of outcomes data from well-designed randomized clinical trials while also understanding the limitations of applying the results of such studies to actual clinical practice (Levant, 2004). Additionally, therapists need to understand important therapy process variables and how to adapt interventions based on feedback during the course of therapy (Pinsof, 2004). In this regard, it is also important that providers match treatment modalities with clients' needs, goals, and values. Couple therapists should have skills to understand and reframe partners' problems from a relationship and systemic perspective. As treatment plans evolve, it also requires modification of interventions to address changes in therapy course and goals. Ongoing evaluation of progress is necessary to ensure that interventions which are not working are changed. In the context

of couple therapy, it is incumbent on the provider to form healthful therapeutic alliances with partners and set appropriate boundaries, manage issues of triangulation, and develop collaborative working relationships.

Understanding of Legal Issues, Ethics, and Standards. In the course of their training, providers are routinely taught to perform all professional activities in a manner that is consistent with a standing code of ethics (e.g., American Psychological Association, 2002) as well as any applicable state, federal, and provincial laws. However, it is also important to recognize that formal ethical and legal codes are often developed with individual clients in mind and not larger systems, such as couples or families. It is important to recognize that couple therapists operate within the legal system, but, in many cases, know little about it and are frightened by it. As such, it is critical for couple therapists to understand legal and ethical issues unique to the treatment of couples, including the definition of the client, the relationship the provider has with each person in the dyad, complexities of confidentiality and its limits, managing multiple relationships, and so on. Couples therapists need to recognize when legal consultation may be necessary and monitor professional issues as they relate to ethics, laws, regulations, and professional standards. They also need to have a strong working knowledge of how to develop safety plans for those clients and couples who present with issues related to self-harm, suicide, abuse, or violence. As such, couples therapists must know how to report information, as well as what information, to appropriate authorities as required by law (including legal aspects of obtaining releases of information, protecting the record as necessary, and responding to subpoenas and court orders). From a more day-to-day practice perspective, couples therapist must maintain clinical records with timely and accurate notes and bill clients and third-party payers in accordance with professional ethics and relevant laws and policies.

Current Knowledge of Research and Program Evaluation. There is a large and growing empirical literature on couple therapy, not only for general relationship distress, but also its application to other problems (e.g., depression, substance abuse). A provider must learn evidence-based models of couple therapy and apply that information to systemic interventions with the couples with whom they work. To do that, providers need to have some familiarity with research and program evaluation methodologies (both quantitative and qualitative) relevant to couple therapy and broader mental health services. This allows providers to critique the emerging empirical literature and assess the quality of the investigations. Additionally, couple therapists very often have the opportunity to contribute to the development of new knowledge via participation in research that involves couples and families. Research contexts are a unique and complex setting for the provision of service, since the goals of investigation may be to determine if a treatment is effective and how it works. In that situation, a couple therapist may be providing a service that may ultimately have no benefit (or even be harmful) to those clients who are involved, which usually cannot be determined until after the investigation is complete and the data are analyzed.

13.7 Expert Competencies of the Clinician

The core competencies described above represent knowledge and skill areas that all providers who treat couples and other family systems have some mastery; yet, these core competencies represent a minimal standard. In many important respects, a couple therapist who has the requisite background, training, education, and experience in the core competencies communicates

to potential consumers of services with increased confidence that participation in therapy will not result in any harm. In other words, having mastered these core competencies is a rather low threshold to surpass for providers who treat couples and families.

However, providers can and often do rise above a basic level of competence toward a greater level of recognized expertise. Indeed, there are more specialized knowledge, skills, and background that designate a level of competency that appreciably exceeds the core competencies. These areas include the following:

- Consultation and inter-professional collaboration
- Supervision
- Integration of individual and cultural diversity into practice

Of course, these expert competencies are not completely distinct from the core competencies, but represent a knowledge and skill base that should be viewed more as augmentations and enhancements. In many respects, these expert competencies reflect professional activities and aspects of professional identity more closely aligned with couple and family therapy "experts."

Consultation and Inter-Professional Collaboration. As is often the case, the provision of couple therapy occurs in many different settings, such as medical schools, outpatient mental health settings, or in the home (McDaniel, Belar, Schroeder, Hargrove, & Freeman, 2002). Thus, couple therapists who work in different settings must be able to establish effective collaborative relationships among the various stakeholders and, in turn, develop a multidisciplinary solution to presenting problems that are in the best interest of the couple. It requires an understanding of the dynamic relationship between the couple therapist and the context where therapy is provided, with an effort to capitalize on the strengths of the setting to increase the likelihood of healthful outcomes.

As an example, couples and family therapy providers very often find themselves giving services in various healthcare settings in which therapists provide relationship-centered care within the context of a collaborative family healthcare approach (e.g., McDaniel & Campbell, 1996). Many therapists serve couples in the context of a family illness of some kind (e.g., illness in children, illness of a partner's parents); in these settings, the therapist must have advanced skills in family assessment, methods of family support, and disease management from a familial perspective (Kazak, Rourke, & Crump, 2003). This skill set includes making efforts to engage the couple and other family members as full partners in their health care, attend to collaborative values within the family and the health care team, and negotiate issues of communication, problem solving, and conflict resolution between the family and the health care professionals.

Supervision. The need for competency in supervision has emerged as a significant practice area for couple therapists, who very often find themselves involved in supervising other couple therapists and family treatment providers. In a time of shrinking health care dollars, it is often viewed as more cost-effective to have an expert therapist provide supervision to several less experienced (and presumably lower paid) providers. Thus, couple therapists are often promoted to supervisory positions and, as such, must develop and hone the skills necessary to provide quality oversight of other providers.

As has been recommended by several authors (e.g., Fraenkel & Pinsof, 2001; Lee & Everett, 2004), it is most productive and appropriate to provide supervision based on either (a) *theoretical eclecticism*, in which supervisees are exposed to multiple theories and can, in turn, select from different approaches when confronted with different presenting problems, or (b) *assimilative integration* in which supervisees are introduced to multiple theoretical perspectives but are

allowed to maintain a secure base in one. Most couples and family therapists who oversee other providers should use, and be comfortable with, fairly tried-and-true supervisor techniques: case presentations, tapes (audio or video), live supervision, and co-therapy (Sprenkle & Wilkie, 1996). Of course, supervisory formats depend on the preferences of the participants (i.e., supervisees, couples, family members), the learning goals of the supervisee, and the professional setting where the supervision occurs (Storm, Todd, Sprenkle, & Morgan, 2001).

In the context of evidence-based practice and the conduct of couple and family therapy in research settings, such interventions are usually guided by therapy manuals, which pose important challenges to the supervisory process (e.g., Liddle, Becker, & Diamond, 1997). The manuals prescribe specific therapy approaches and provider behaviors, as well as proscribe behaviors that are not recommended or prohibited. Manuals allow for very clear supervisory targets, allowing for evaluation of adherence to the manuals and competence of delivery. However, providers can also experience manuals as a factor limiting creativity and not flexible enough to address the needs of diverse populations, problems, and treatment contexts. Supervisors in this context are required to ensure that those providing manualized interventions follow the manuals to ensure treatment fidelity.

Integration of Individual and Cultural Diversity into Practice. Integration of multicultural conceptualization and treatment of emotional and behavioral problems have become a cornerstone of professional practice, including couple and family therapy. As an example, there has been more explication in the literature on psychotherapy with gay, lesbian, and bisexual couples (Division 44, 2000). All of the basic and advanced competencies must be understood with attention to factors, such as age, gender, gender identity, race, ethnicity, culture, religion, spirituality, sexual orientation, disability, language, and socioeconomic status. Providers must also be self-aware and have knowledge of the impact of ageism, racism, sexism, and homophobia in all aspects of practice (Daniel, Roysircar, Abeles, & Boyd, 2004). The integration of individual and cultural diversity into practice underscores the importance of providers becoming familiar with one's own culture and the cultures of the couples and families with whom they work (e.g., Lee & Everett, 2004).

In addition to the above, many expert couple therapists also develop expertise in the application of couple and other systemic approaches to individual, diagnosable adult psychiatric/psychological disorders. Research on couple treatment has shown that individual problems and relationship problems influence each other dynamically. Many experts have applied couple therapy to many psychiatric disorders, including alcoholism and drug abuse (e.g., Fals-Stewart, O'Farrell, & Birchler, 2003), depression (e.g., Beach & O'Leary, 1992), personality disorders (e.g., Fruzetti & Fantozzi, 2008), and sexual dysfunction (McCarthy & Metz, 2007).

13.8 Transition from Basic Competencies to Expert

The transition from basic to expert competency involves three interrelated professional processes: (a) ongoing and increased didactic education, (b) training and supervision from experts, and, in some instances, (c) designation by a recognized professional body as an "expert." Of course, these tasks are inherently developmental in that it takes time over the course of a career to accrue the necessary background, education, training, and experience to be deemed an "expert" in couple therapy.

As a framework for understanding the transition from basic to expert competency, it is informative to examine established criteria for certification or designation as an expert that are

used by professional organizations. Once such professional organization is The American Board of Couple and Family Psychology (ABCFP), which is a member board of the American Board of Professional Psychology (ABPP). The ABCFP is responsible for establishing criteria related to the definition, education, training, and competencies leading to certification as a specialist in Couple and Family Psychology. Such board certification assures the profession and the public at large that the designee has the competencies required to provide quality service in couple and family therapy.

To attain certification from the ABCFP, according to their Web site (http://www.abpp.org/brochures/FM.pdf) applicants must meet the following general eligibility requirements:

- A doctoral degree from a program in professional psychology that is accredited by the American Psychological Association or the Canadian Psychological Association
- Licensure or certification to practice independently as a psychologist in the State, Province, or Territory in which the psychologist practices

In addition, ABCFP notes three specialty-specific eligibility requirements:

- Completion of a recognized internship and
- A recognized postdoctoral residency program in Couple and Family psychology or
- At least one postdoctoral year of supervised practice in Couple and Family Psychology and two graduate Couple and Family Practicum courses or equivalent and 40 h of continuing education in Couple and Family Psychology or closely related activities

Beyond these general eligibility requirements, applicants are also required to pass an individualized, peer-reviewed examination. The examination encompasses the following competencies:

- Assessment and intervention
- Science base and application
- Ethics and legal foundation
- Professional identification
- Consultation and supervision

As is evident, these competencies fall in the core and expert areas. The exam involves, in part, the application of knowledge and skills to complex problems – individual, dyadic and family problems – conceptualized from a systemic perspective. Thus, it requires the advanced understanding of all competencies, both basic and advanced.

13.9   Summary

Judging by the volume of attention in the scientific and lay press, marriage has been and remains an extremely important social institution. It is one which definitely has challenges and inherent difficulties as well as rewards. Societal changes occur in the popularity and stability of marriage over time. Nevertheless, over 90% of the adults in the USA ultimately give it a try and, when successful, the union provides the basis for better psychological, physical, and financial health for partners, parents, and children alike. The field of marital therapy also has persisted as a method and profession to help distressed relationships improve partners' relationship satisfaction and functioning and/or to avoid relationship breakup. Although some marriages are inherently unhealthy for participants and should be dissolved, many suffer from self- and

relationship-defeating patterns of interaction that can be modified to provide the relationship quality that partners sought at the outset. The first part of this chapter provided a comprehensive overview of the clinical competencies which are necessary to recognize and assess relationship functioning and conceptualize couples' strengths and weaknesses in areas that may inform treatment, and seven evidence-based approaches to marital therapy that have been thoroughly developed over the past 4 decades. Compared to treatment outcomes for many other psychological problems, those for marital therapy generally are quite good. These approaches offer different insights into the potential mechanisms of action that may effect healthful outcomes for the couple.

The American Association for Marriage and Family Therapy (2004) has identified six core areas in which couple therapists should possess minimum competencies to practice: treatment decision making; assessment and diagnosis; treatment planning and case management; knowledge of evidence-based therapeutic interventions; and legal and ethical issues. As the couple therapist progresses in his or her professional development, shifts toward expert competency broaden toward mastery of supervision of other therapists; collaboration across relevant providers; and integration of cultural and contextual diversity issues of the couple. Credentialing, as through professional certification by the American Board of Couple and Family Psychology, offers an important mechanism by which professionals and clients alike may recognize a therapist's advanced level of expertise. However, at any stage of a practice career, the therapist must recognize that there is always room for improvement, not only in determining what components of various approaches work for which couples with which particular problems, but in developing innovative, integrative, accessible, and efficient services that are effective.

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14 Organic Disorders

Karlee D. Fellner · John R. Reddon

Abstract: Organic mental disorders, in contrast to functional (i.e., psychological) disorders, have historically been defined as mental disorders that can be attributed to biological pathology. Disorders that were classified as organic mental disorders in previous editions of the DSM have been divided into three separate sections in the DSM-IV: (1) Delirium, Dementia, and Amnestic and Other Cognitive Disorders; (2) Mental Disorders Due to a General Medical Condition; and (3) Substance-Related Disorders. Organic mental disorders may be classified as either acute or chronic based on duration, abruptness on onset, and defining symptoms. Proper assessment and diagnosis of organic disorders is essential, as leaving them untreated may lead to further deterioration or premature death. The majority of organic disorders are maintained by the underlying biological cause, and therefore require medical treatment to ameliorate the condition. However, a biopsychosocial approach to treatment is required to address all symptoms, particularly as organic disorders often have affective and relational consequences as well. Psychotherapy and cognitive rehabilitation strategies have been shown to be effective with a variety of acute and chronic organic disorders. Although therapeutic interventions with chronic degenerative conditions, such as Alzheimer's dementia, cannot produce permanent change, they can optimize the person's functioning and increase quality of life. In other cases, such as moderately severe amnesia, memory functions that have been compromised may be recovered through neuro-rehabilitation. Each individual (i.e., case) is unique and depends not only on the physical factors involved but also on personal, relational, and contextual features. Thus, clinicians that practice with this heterogeneous population need considerable knowledge and clinical experience which should include competence in geropsychology and neuropsychology as well as rehabilitative and psychotherapeutic procedures.

14.1 Overview

Organic mental disorders have traditionally been defined as mental disorders that result from underlying physical processes, distinct from "functional" disorders, which are considered to be psychological in origin (Lipowski, 1984; Spitzer et al., 1992). This dichotomy originated with acceptance of Cartesian dualism in the seventeenth century (Spitzer et al.). From this emerged two separate classes of psychiatry: one emphasizing the anatomy and physiology of the brain, and the other the unconscious mind and other mental phenomena (Spitzer et al.). The DSM-I included a section titled "organic brain disorders" [sic], which consisted of acute (reversible) and chronic (irreversible) classifications (American Psychiatric Association [APA-psychiatry], 1952). The DSM-II renamed the disorders "organic brain syndromes" [sic], which were subdivided into psychotic and nonpsychotic, and further narrowed down as acute (reversible) or chronic (irreversible; APA-psychiatry, 1968). Both sources defined the essential feature of these disorders as "basic organic brain syndrome" [sic] – a unitary clinical picture characterized by global cognitive impairment (Lipowski, 1980, 1984; Seltzer & Sherwin, 1978). These approaches

were very restricted, and led to invalid prognoses and inadequate treatments, especially with regard to the chronic/irreversible versus acute/reversible distinction (Lipowski; Seltzer & Sherwin). The DSM-III expanded the definition of an organic disorder from "basic organic brain syndrome" [sic] to "psychological or behavioral abnormality associated with transient or permanent dysfunction of the brain" (APA-psychiatry, 1980, p. 101). With this revision, the distinctions between psychotic/nonpsychotic and reversible/irreversible were abolished. It was recognized that symptoms consisted of more than cognitive impairment, and that they may even manifest in a similar manner to nonorganic syndromes (Lipowski). Since that time, there has been debate over the appropriateness of the term "organic disorders," and with the release of the DSM-IV in 1994, it was abolished altogether. It has been argued that the use of this term implies that "functional disorders" do not have an organic basis; in other words, that symptomatically nonorganic problems should not be investigated for organic etiology (Hays, 1985; Kopelman & Fleminger, 2002; McEvoy, 1981; Spitzer et al.). Because organic disorders may manifest as functional syndromes, this prevents proper diagnosis and deprives the client of necessary treatment (Hays; McEvoy; Spitzer et al.; Taylor, 2007). Classifying a patient as having either an organic or functional issue may bias professionals' conceptualization of the syndrome, leading to erroneous diagnosis and treatment (Drossman, 2006; Spitzer et al.). The term "organic disorders" is also problematic in that it implies that biological processes do not contribute to nonorganic disorders, though we now know that this is not true (Kopelman & Fleminger; Spitzer et al.). What were once called "organic disorders" are now divided into Delirium, Dementia, and Amnestic and Other Cognitive Disorders; Mental Disorders Due to a General Medical Condition; and Substance-Related Disorders in the DSM-IV (APA-psychiatry, 2000). Despite this, the term "organic disorder" will be used throughout this chapter for ease of reference to these categories.

Organic mental disorders may be classified as either acute or chronic based on duration, abruptness of onset, and defining symptoms. Acute reactions have an abrupt onset, and the majority of them can be reversed when the organic pathology is treated. The most important diagnostic feature in acute conditions is impairment of consciousness, namely deficits in memory, thinking, and attention. Chronic disorders, on the other hand, are marked by general cognitive impairment that may initially manifest as changes in behavior. They have a more gradual onset than acute reactions, and they are typically the result of widespread affections of the brain, although some may be localized. It is sometimes difficult to distinguish between acute and chronic disorders, and there is the possibility for an acute condition to develop into a chronic condition over time (Lishman, 1998; also see the forthcoming revision of this text by David, Fleminger, Kopelman, Lovestone, & Mellers, 2009).

The primary change in acute organic reactions is impairment of consciousness, which may range from slight clouding of awareness to severe coma. This may include difficulty in judging time, focusing attention, or thinking clearly. Disruptions in sleep are also present in most cases. These impairments often fluctuate, typically worsening at night, a characteristic that distinguishes an acute reaction from a chronic one. As impairment of consciousness increases, motor behavior tends to deteriorate, and emotionality progresses to a flat affect. In a minority of cases, the opposite occurs – hyperactivity, boisterousness, and repetitive, purposeless behavior accompanied by affective disturbances such as depression, paranoia, fear, and anxiety. Logic and reasoning also become impaired, and subjective reality supersedes external reality in the person's consciousness. Delusions may become a part of this reality, the most common being persecutory ideation. Disordered perception is common in acute

reactions, often resulting in depersonalization and difficulty in accurately perceiving auditory and visual stimuli. The most common perceptual disturbances are visual hallucinations. Registration, retention, and recall of information may also be impaired. Upon recovery from the condition, there is often an amnesic gap with vivid memory of sensory impressions, particularly hallucinations. In its early stages, an acute organic reaction may present with features seen in phobia, depression, hypochondriasis, conversion disorders, and schizophrenia (Lishman, 1998).

The majority of chronic organic disorders emerge gradually without an obvious precipitating incident, although some cases follow acute episodes such as anoxia or trauma. The earliest signs of chronic organic disorder are typically seen in deterioration of memory or more general intellectual impairment, particularly in terms of abnormal behaviors, loss of initiative, and episodes of confusion. If these changes are not obvious right away, one may notice changes in personality such as inappropriate social behaviors or exaggeration of preexisting personality traits. As the condition progresses, reduced concentration, decreased ability to pursue decisive action, and mental fatigue become evident. Thinking is slowed, and logic and abstract reasoning are impaired. Judgment is impaired, and the person typically does not have insight into his or her condition. Disorientation to time typically occurs early on, while disorientation to place and person occurs later in the illness. Memory deficits are usually global, involving impairment of registration, retention, and recall. Memory for names and past events may become disorganized as well, and confabulation often occurs. As with acute organic reactions, persecutory delusions and paranoia may become part of the person's reality. Poverty of speech is typically manifested in perseveration, reduced vocabulary, and poor sentence construction. In the later stages of the illness, the person may become mute or express only selected words. Hygiene and continence tend to deteriorate. Early in the course of the illness, agitation, anxiety, depression, anger, confusion, and suspicion are often seen. As the condition worsens emotions become shallow and flat, at times characterized by periodic outbursts of laughing, anger, or crying (Lishman, 1998).

Disorders that were previously classified as organic mental disorders have been divided into three separate sections in the DSM-IV: (1) Delirium, Dementia, and Amnestic and Other Cognitive Disorders; (2) Mental Disorders Due to a General Medical Condition; and (3) Substance-Related Disorders. The first group of disorders is characterized by a significant change in cognitive functioning that is due to a general medical condition, a substance, or a combination of these. The second section describes mental disorders that are the physiological result of a general medical condition. Finally, substance-related disorders are caused by taking medication, ingesting drugs or alcohol, or exposure to toxins. This section of the DSM includes two categories: Substance-Induced Disorders and Substance Use Disorders. This chapter does not cover Substance Use Disorders because they do not fall under the category of organic mental disorders (APA-psychiatry, 2000).

14.2   Recognition of Symptoms and Their Assessment

One of the most challenging aspects of working with clients with psychological or physical disorders is correctly diagnosing the condition. Many organic disorders are manifested in behavioral, mental, and emotional symptoms that are commonly associated with psychological disorders (Taylor, 2007). Although most clients who present for assessment and/or treatment

have psychosocial issues, clinicians must be careful to assess for, and rule out, organicity (Taylor), as failure to recognize an organic disorder may lead to severe deterioration or even death (Dilsaver, 1992). The current section provides an overview of organic disorders and their symptoms as defined by the DSM-IV-TR (APA-psychiatry, 2000), and then focuses on the assessment and diagnosis of these conditions.

Delirium. Delirium is the most clinically severe acute organic disorder (Goodwin & Guze, 1996). A diagnosis of delirium requires a disturbance in consciousness and a change in cognition that is not accounted for by dementia. Deliria are usually of rapid onset and are directly caused by medication, substance intoxication or withdrawal, toxin exposure, a general medical condition, or a combination of these. The client experiencing delirium will find it difficult to focus or shift attention, and may perseverate on ideas. Common cognitive deficits include impaired memory, disorientation to time or place, perceptual disturbances, and speech or language impairments. The disturbance of consciousness, rapid onset, and fluctuation in symptom severity throughout the day distinguish delirium from dementia (APA-psychiatry, 2000; Broshek & Marcopulos, 1999).

Dementia. Most cases of dementia are the result of brain disease or loss of brain tissue (Goodwin & Guze, 1996). Dementia is diagnosed based on the presence of multiple cognitive deficits, including memory impairment and at least one of agnosia (inability to identify or recognize objects), aphasia (degeneration of language), apraxia (difficulty executing motor activities), or disturbed executive functioning (decline in abstract reasoning and difficulty with planning and completing complex behavior) (APA-psychiatry, 2000). Clients with dementia may initially present with somatic complaints or depressive symptoms (Goodwin & Guze). These symptoms are of gradual onset and are the result of a general medical condition or the continuing effects of substance use, or both. Memory impairment is first observed in the client's difficulty learning new material. He or she then forgets recent memories, eventually forgetting earlier ones. These symptoms significantly impair the person's social or occupational functioning (APA-psychiatry; Perez Riley, 1999). The DSM-IV further differentiates between ten subtypes of dementia based on etiology, such as Alzheimer's dementia, vascular dementia, and dementia due to head trauma (APA-psychiatry), with 60–80% of the cases being Alzheimer's (Pelton, 2003). Each type of dementia has unique features with implications regarding prognosis and treatment (O'Donnell, Molloy, & Rabheru, 2001; Perez Riley, 1999).

Amnestic Disorders. Amnestic disorders are characterized by memory impairment that is caused by substance use or a general medical condition. As with dementia, this deficit severely inhibits the client's social or occupational functioning, and shows a marked decline from his or her previous level of functioning. Learning and recall of new information is always impaired, whereas ability to recall previously learned information depends on the extent of the brain damage. In the early stages of development, symptoms associated with delirium, such as disorientation and confusion, may be evident, but these typically diminish over time. Amnestic disorders are distinguished from deliria through the ability to shift and focus attention, and from dementias through the absence of additional cognitive deficits (APA-psychiatry, 2000).

Mental Disorders Due to a General Medical Condition. Mental disorders due to a general medical condition are the direct physiological result of such a condition, as determined through laboratory tests, history, or physical examination. Although it may be difficult to link a disorder directly to a medical condition, evaluation of a number of factors can help this: a temporal association between psychiatric symptoms and onset, remission, or exacerbation of a medical

condition, presence of features not typical of the primary disorder, and remission of medical and psychiatric symptoms with treatment of the medical condition. The DSM-IV distinguishes between ten disorders that may be due to a general medical condition, including personality change, psychosis, sexual dysfunction, catatonia, and, delirium, dementia, and amnestic disorders (APA-psychiatry, 2000).

Substance-Induced Disorders. Substance-induced disorders are the result of toxin exposure, ingestion of a drug of abuse, or side effects of medication. The DSM-IV identifies 12 categories of substances that may cause a substance-induced disorder, such as alcohol, amphetamines, caffeine, cannabis, nicotine, opioids, sedatives, and polysubstances. Substance intoxication and withdrawal are common to each substance but nicotine does not cause intoxication. Symptoms are substance-specific, and in order to be diagnosed, there must be clinically significant impairments in functioning. These syndromes are temporary, and symptoms remit at some point after discontinuation of substance use. Substance-specific descriptions are provided in the DSM. Other substance-induced disorders are categorized in the DSM-IV according to the nature of their symptoms, for example, sexual dysfunction, mood disorder, dementia, and psychotic disorder (APA-psychiatry, 2000).

Accurate assessment and diagnosis are vital with clients with organic disorders, as some of these conditions may lead to further decline or death if left untreated (Broshek & Marcopulos, 1999; Dilsaver, 1992; Lishman, 1998). Unfortunately, this is often complicated, as symptoms of organic conditions often closely resemble those of psychological disorders. Some of the more common symptoms include paranoid delusions associated with schizophrenia, depression, mania, anxiety, obsessions and compulsions, and violent behavior (Goodwin & Guze, 1996; Lishman; Taylor, 2007). Further complicating this, there may be losses and stressors in the person's life that the clinician may mistake for playing an etiological role in a psychosocial dysfunction. Psychological and organic disorders may also coexist. Therefore, when a client with a psychiatric history presents with new symptoms, they must be assessed independently as they may not be of psychological origin (Taylor). These disorders may also interact and affect symptom presentation (Sullivan, 1990).

Beyond overt presenting symptoms, there are several subtle characteristics that differentiate organic from psychological disorders (Dilsaver, 1992; Goodwin & Guze, 1996; Lishman, 1998; Taylor, 2007). A disorder is more likely to be organic than psychosocial, if onset of the first episode is after the age of 40, there is no family or individual history of psychiatric illness, the client has a systemic disease, the client is taking centrally acting drugs, the client exhibits disorientation or recent memory impairment, the client is experiencing epileptic fits, the client is not able to discriminate sensory input, there is a temporal association between the episode and withdrawal of a drug, the client is using a substance of abuse, the client has an autonomic dysfunction, the client is experiencing nonauditory hallucinations, the client's reasoning abilities have diminished, or if the client was functioning well prior to symptom onset (Dilsaver; Goodwin & Guze; Lishman; Taylor). Taylor has also indicated seven situations in which organicity should be assumed until proven otherwise: the client has suffered a head injury, has noticed a change in his or her headache pattern, is experiencing visual disturbances such as double vision, has speech deficits such as dysarthria or aphasia, has difficulty with balance and changes in gait, has sustained deviations in vital signs such as heart rate, or is experiencing changes in consciousness such as drowsiness and lapses. Differential diagnosis among the organic disorders themselves may also be complicated and ambiguous, but is essential for treatment planning (Zarit & Zarit, 2007). The reader is encouraged to consult the DSM-IV-TR

(APA-psychiatry, 2000) and Lishman for specific details on differentiating among organic disorders and between organic and psychological disorders.

Given the challenges presented in accurate diagnosis of organic disorders, very thorough clinical assessment procedures need to be carried out. Throughout assessment, the clinician must attend to the client's appearance, general behavior, mood, and thought content (Howieson & Lezak, 2008; Lishman, 1998; Taylor, 2007). History taking from both the client and others in the client's life is essential, and is often the key to determining whether a disorder is organic or psychological in origin (Campbell, 2000; Dilsaver, 1992; Goodwin & Guze, 1996; Howieson & Lezak; Lichtenberg & Duffy, 2000; Lishman; Taylor). In addition to narrowing down the diagnosis, obtaining a detailed history also guides further assessment procedures, gives a context in which to interpret test results, provides an opportunity to assess the client's perceptions and nonverbal behaviors, and helps determine the appropriate treatment direction (Dilsaver; Goodwin & Guze; Lishman; O'Donnell et al., 2001; Strauss, Sherman, & Spreen, 2006; Taylor). It is important to look at the client's past medical history, particularly for diseases associated with psychosis, as well as family medical and psychiatric history, as many organic disorders have a genetic basis (Campbell; Dilsaver; Goodwin & Guze; Lishman; Strauss et al., 2006). Recent and past use of alcohol, drugs, and medications needs to be discussed, particularly in terms of any temporal relation between use and the onset of the disorder (Campbell; Dilsaver; Lishman; Strauss et al., 2006). For detailed instructions regarding interviewing and history taking refer to Strauss et al.

A complete neuropsychiatric evaluation is time-consuming and expensive. Therefore, when time or resources are limited, brief screening tests may be used. These tests may facilitate differential diagnosis, allowing more prompt and effective treatment (Serper & Allen, 2002). Some simple tests that, if positive, indicate organicity are likely to include the Write-a-Sentence Test (assesses global brain dysfunction), the Draw-a-Clock Test (assesses visual-spatial ability and ability to write sequential numbers and tell time), and the Copy-a-Three-Dimensional-Figure Test (assesses spatial appreciation; Taylor, 2007; Zarit & Zarit, 2007). Brief cognitive screening tools that may be used include the Standardized Mini Mental Status Examination (SMMSE; Molloy, 1999) and the Modified Mini Mental Status Examination (3MS; Teng & Chui, 1987), the Neurobehavioral Cognitive Status Examination (COGNISTAT; Kiernan, Mueller, Langston, & Van Dyke, 1987), the Cognitive Capacity Screening Examination (CCSE; Jacobs, Bernhard, Delgado, & Strain, 1977), the High Sensitivity Cognitive Screen (HSCS; Fogel, 1991) which may detect mild impairments, and the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS; Randolph, 1998), which is suitable for more severely impaired clients (Serper & Allen; Strauss et al., 2006; Zarit & Zarit). Despite the utility of these instruments, the clinician must pursue further evaluation, if there is ambiguity regarding diagnosis.

When diagnosis remains unclear after the interview and screening, the client should be referred for physical and neurological examinations (Dilsaver, 1992; Lishman, 1998; Taylor, 2007). Examinations often identify etiology and guide treatment (Boutros, Thatcher, & Galderisi, 2008; Howieson & Lezak, 2008; Lishman). A medical examination may confirm organicity; however, clinicians are cautioned not to disregard evidence of organicity if the patient has been medically cleared, as signs of organic etiology may be missed, especially early on (Taylor). Physical signs that are important to watch for are listed in Lishman. Ancillary investigations are often required as well, including procedures such as electroencephalography (EEG), radiography, computerized axial tomography, and magnetic resonance imaging (Boutros et al., 2008; Lishman). If the diagnosis is still unclear, the client should undergo a

neuropsychological assessment (NPA; Campbell, 2000). NPA is the best way to assess cognitive impairments resulting from damage to brain tissue (Manning, 2001). It involves a report of impaired and preserved cognitive functions, and may distinguish between organic and psychological symptoms. Furthermore, it may detect subtle neurological deficits in the early stages of the illness, when other tests, such as medical exams, fail to find any evidence of dysfunction (Manning). A complete assessment should examine orientation, attention and concentration, memory, intelligence, general knowledge, conscious awareness, affect, language functions, verbal fluency, and visuospatial and constructional abilities (Campbell; Howieson & Lezak; Lishman; Manning; Taylor).

Neuropsychological testing is unique in that it involves comparing the client's current functioning with the estimated level of premorbid functioning, as well as comparing his or her current functioning in different areas (Howieson & Lezak, 2008; Zarit & Zarit, 2007). Some of the cognitive tests that are commonly used include the Dementia Rating Scale-2 (DRS-2; Jurica, Leitten, & Mattis, 2001), the Delirium Rating Scale (DRS; Trzepacz, Baker, & Greenhouse, 1988), the Wechsler Adult Intelligence Scale-III and the Wechsler Memory Scale-III (Psychological Corporation, 2002), the Bender–Gestalt Test (Bender, 1938), the Kaplan Baycrest Neurocognitive Assessment (KBNA; Leach, Kaplan, Rewilak, Richards, & Proulx, 2000), the National Adult Reading Test-2 (NART-2; Nelson & Willison, 1991), the Boston Naming Test (Kaplan, Goodglass, & Weintraub, 1983), and the Kendrick Cognitive Test for the Elderly (Kendrick, 1985). The Neuropsychological Assessment Battery (NAB; Stern & White, 2003) consists of modules assessing major functional domains important to NPA, and is appropriate for use with adults up to the age of 97 (Strauss et al., 2006). If a client is severely impaired, other screening tests such as the Severe Impairment Battery (SIB; Panisset, Roudier, Saxton, & Boller, 1994) may be used to prevent a floor effect. There are several assessment instruments that focus specifically on different elements of cognition, executive function, personality and affect, conceptual functions, attention, memory, language, perception, and sensory and motor function (Howieson & Lezak; Lichtenberg, 1999a; Strauss et al.; Sultzer, 2000; Zarit & Zarit). For further information on these, the reader is encouraged to consult Strauss et al. and Lishman (1998).

It is important to keep in mind that people may perform poorly on these cognitive tests for a number of reasons aside from impairment, including education, cultural differences, language or hearing difficulties, or age (Campbell, 2000; Molloy, Darzins, & Strang, 1999; Perez Riley, 1999). Therefore, tests should be carefully selected based on characteristics of the particular client. For example, there are several brief assessment batteries that have been designed for use with an elderly population so as to avoid lengthy NPA batteries (Lichtenberg & Duffy, 2000). Similar or related abilities should be assessed with multiple measures to increase validity of test interpretation (Howieson & Lezak, 2008; Zarit & Zarit, 2007). Due to the difficulty of differential diagnosis, the extensive nature of NPA, and the immediate importance of identifying the disorder, assessment and diagnosis of organic disorders should ideally be carried out by a multidisciplinary team of experienced professionals (Broshek & Marcopulos, 1999).

14.2.1 Maintenance Factors in Organic Disorders

The factors that contribute to maintenance of an organic disorder depend largely on its primary etiopathology (APA-psychiatry, 2000). Chronic conditions are usually progressive, and

are maintained by the damage that has been done, as well as the further damage that typically occurs as a result. However, gradual improvement or a halt in degeneration may be obtained through treating the primary pathology or presenting symptoms (Lishman, 1998). Acute conditions are maintained by electrical, biochemical, or mechanical disturbances in brain function, and are typically resolved when the underlying pathology is treated (Lishman).

Delirium results from a dysfunction in neurotransmission, neuronal metabolism, or input from subcortical structures (Blass, Nolan, Black, & Kurita, 1991). There are a number of potential causes, such as primary central nervous system disorders, systemic disturbances, and drug or toxin exposure. Generally, delirium is maintained by its underlying cause. For example, delirium due to medication, such as anticholinergic drugs, benzodiazepines, or opiates, typically continues so long as the drug remains in the system (Trzepacz & Meagher, 2008). However, there are specific factors that may prolong an episode of delirium (Lishman, 1998; Trzepacz & Meagher). Medications, particularly pain medications and anticholinergic drugs, tend to aggravate the condition (Trzepacz & Meagher). Delirium lasts longer when there have been structural and degenerative changes in the brain, making older individuals, especially those with dementia, particularly susceptible (APA-psychiatry, 2000; Trzepacz & Meagher). Stressful environments and situations may also prolong or exacerbate symptoms (Tune, 2000; Zarit & Zarit, 2007). As well, multiple etiologies often occur serially or concurrently, which generally increases the length of the episode. Recovery is faster when the underlying etiological factor is corrected or self-limited (Trzepacz & Meagher).

In most cases, dementia is a chronic degenerative condition maintained by the progressive loss of neurons in the brain (Lishman, 1998; Trzepacz & Meagher, 2008). However, depending on the etiology, dementia may also be static or may even remit (APA-psychiatry, 2000; Lishman, 1998). The most common form, Alzheimer's dementia, is a progressive neurodegenerative condition caused by the accumulation of specific proteins in the brain (APA-psychiatry; Trzepacz & Meagher). In addition to the primary effects, this also sets off other neurological events that contribute to additional damage, eventually leading to death (Zarit & Zarit, 2007). In vascular dementia, the damage resulting from hemorrhages or ischemia is permanent, but further degeneration may be prevented by treatment of the vascular disease and hypertension (APA-psychiatry; Reichman, 2000; Trzepacz & Meagher). The majority of dementias due to general medical conditions, such as HIV, Huntington's, and Parkinson's disease, are progressive. However, some may be static or show improvement, such as dementia due to head injury if there is only one incident of injury (APA-psychiatry; Lishman; Trzepacz & Meagher). Dementia may be exacerbated by factors such as high levels of psychological stress, ingestion of certain medications, or the existence of comorbid health or psychological issues, such as depression (Trzepacz & Meagher; Zarit & Zarit). In cases where the dementia is a result of a treatable problem, such as nutritional deficiency, hypothyroidism, or toxin exposure, the dementia typically worsens so long as the etiological source is present; alleviation of the original cause may stop progression of the dementia, and possibly partially reverse it (Zarit & Zarit).

Amnesia may result from a variety of factors, such as head injury, medical conditions, substance use or abuse, electroconvulsive therapy, and strokes (APA-psychiatry, 2000; Trzepacz & Meagher, 2008). The duration of amnesia depends on the underlying primary pathology (APA-psychiatry). The neural mechanisms underlying memory are unclear, and theories up to this point are incomplete and speculative (Eslinger, Zappala, Chakara, & Barrett, 2007; Lishman, 1998), although it has been established that in cases of brain injury, longer amnestic episodes are associated with more hemispheric lesions (Trzepacz & Kennedy, 2005). As well, damage to

middle-temporal lobe structures appears to cause persisting impairments in declarative memory (APA-psychiatry; D'Esposito, 2000). On average, amnestic disorders due to brain injury last longer than those due to other causes, perhaps due to the extent of the damage (Trzepacz & Kennedy). With concussions, anterograde amnesia may last a few seconds to several hours, although it rarely exceeds a day. Retrograde amnesia typically "shrinks" over time (Collins, Iverson, Gaetz, & Lovell, 2007). Amnesia following mild traumatic brain injury typically lasts less than 30 min (Iverson, Lange, Gaetz, & Zasler, 2007). With more severe brain trauma, amnesia may last a few minutes to months after the injury. In these cases, memory usually improves gradually over time (Eslinger et al., 2007). Older clients experience longer episodes of amnesia than younger ones, implicating the role of age in the maintenance of these disorders (Trzepacz & Kennedy). As with the other organic disorders, if the primary cause is addressed, amnesia may be ameliorated.

Specific maintenance factors associated with disorders due to a general medical condition depend on the individual case, as there are a variety of medical conditions that may be involved, as well as several different symptom presentations. In general, these disorders are maintained by the persistence of the underlying medical condition. If the medical issue is addressed, the disorder may subside, although some conditions lead to permanent neurological damages that maintain the disorder (APA-psychiatry, 2000).

Substance-induced disorders are maintained by the immediate or residual effects of the substance on the central nervous system, and thus typically disappear at some point after exposure to the substance is discontinued (APA-psychiatry, 2000; Lishman, 1998). However, some substances cause permanent changes to the function and/or structure of the nervous system (Doctor, 2008). Effects of the substance on the person are highly dependent on the individual, the type of substance, particularly in regard to mechanisms of action and half-life, and the length of exposure to it (APA-psychiatry; Doctor). For example, if one is exposed to certain nerve agents, symptoms are maintained for prolonged periods because acetylcholinesterase has been completely inactivated, and it takes a significant amount of time to regenerate the enzyme. With a condition caused by carbon monoxide poisoning, symptoms are maintained by high levels of carboxyhemoglobin, which is eventually reduced by supplemental oxygen (Doctor). With drugs of abuse, during the time of use, they influence the brain by interacting with specific neurotransmitter receptors or affecting the quantity of neurotransmitter present at the synapse (Nestler & Self, 2008). Therefore, so long as these chemicals remain in the brain symptoms will be observed. When drugs and alcohol are used repeatedly over time, protein synthesis and patterns of gene expression may be altered for extended periods, producing long-term symptoms (Nestler & Self). The three chronic substance-induced disorders are Substance-Induced Persisting Dementia, Substance-Induced Persisting Amnestic Disorder, and Hallucinogen-Persisting Perception Disorder (APA-psychiatry). Aside from those disorders, symptoms should resolve within 4 weeks after the cessation of withdrawal or intoxication symptoms (APA-psychiatry).

14.2.2 Evidence-Based Treatment Approaches

Historically, organic disorders have been treated as biological diseases distinct from functional disorders, which have been considered psychological in origin (Spitzer et al., 1992). However, through modern research and practice, it has become clear that there are complex interactions

between psychological and biological phenomena in both organic and functional illnesses (Spitzer et al.). In organic disorders, psychological and neurological factors typically interact to contribute to symptom presentation, and thus a biopsychosocial approach to the client is required for effective treatment (Drossman, 2006; Forrest, 2008). A detailed neuropsychological assessment provides key information about potential treatments and approaches (Howieson & Lezak, 2008). Treatments range from molecular pharmacotherapy to psychotherapeutic interventions (Horst & Burke, 2008). Because organic disorders have traditionally been viewed as medical issues, research on psychotherapeutic intervention is relatively limited, but has been shown to be very effective in many cases (Forrest).

Psychotherapy with Older Adults. Although organic conditions may be diagnosed at any age, the elderly are particularly susceptible to the development of these disorders (Lipowski, 1980, 1984; Seltzer & Sherwin, 1978; Taylor, 2007). Thus, it is important for the clinician to be aware of the unique aspects of psychotherapy with this population. According to Zarit and Zarit (2007), "geriatric-focused psychotherapy" [sic] involves paying particular attention to assessment, the treatment setting, preparing the client for therapy, goals of therapy, the therapeutic relationship, the role of family, and any medications and medical conditions. It is particularly important to discuss the client's past experiences in therapy, and his or her expectations of the current therapy, as older clients may have misconceptions about the process of therapy (Gallagher-Thompson & Thompson, 1996; Lewinsohn & Tilson, 1987; Zarit & Zarit). In establishing goals, the therapist should focus on supporting the client's autonomy as much as possible, and identifying the treatable aspects of his or her condition. Although the prognosis may be bleak, as with Alzheimer's dementia, there is much that the therapist can do to enhance strengths and increase the client's quality of life (Zarit & Zarit). Effective approaches are typically brief, structured, positively focused, and goal-oriented (Lewinsohn & Tilson; Teri & Logsdon, 1992). When counseling the elderly, it is more likely that family members will become involved in the process, and in the case of degenerative disorders they may also enter therapy to deal with the stress of caring for their loved one (Zarit & Zarit). The therapist may have to slow the pace of therapy, accommodate sensory deficits by presenting information in several modalities, and use written reminders to facilitate memory of details within and between sessions (Gallagher-Thompson & Thompson; Zarit & Zarit). Theoretical orientations typically used with the elderly include behavioral, cognitive-behavioral, psychodynamic, and family systems, in addition to some supportive counseling, psychoeducation, and relaxation (Gallagher-Thompson & Thompson, 1995; Teri & McCurry, 2000; Zarit & Zarit). Although pharmacotherapy may be important in addressing symptoms of organic disorder, potential damaging effects are unpredictable and dangerous, and thus clinicians should carefully monitor their clients' progress (Grossberg & Manepalli, 1995; Zubenko & Sunderland, 2000). Older clients are sensitive to the toxic effects of psychotropic medications in particular, and these medications tend to interact with neurological drugs that may be used to target biological issues (Dubovsky & Buzan, 2000; Grossberg & Manepalli). Where possible, then, supportive and behavioral interventions should be used instead of neuroleptics (Grossberg & Manepalli).

Cognitive Impairment. Cognitive deficits are common in many organic mental disorders (APA-psychiatry, 2000). The areas to be targeted in treatment are determined through a thorough neuropsychological assessment, and the etiology and prognosis will determine the individual treatment program and goals (Franzen & Lovell, 2008; Gordon & Hibbard, 2005; Pierson & Griffith, 2006). In many cases of cognitive impairment, an individualized cognitive rehabilitation program will be implemented. This typically involves a multidisciplinary team

and various techniques intended to increase functioning in specific daily activities (Belleville, 2008; Cicerone, 2007; Gordon & Hibbard; Pierson & Griffith; Ylvisaker, Hanks, & Johnson-Greene, 2002; Zarit & Zarit, 2007). Common interventions include cognitive remediation, stimulation, and training. Cognitive remediation is typically carried out by a psychologist and focuses on strategies to assist clients to complete daily tasks that are difficult due to the impairment (Cicerone; Gordon & Hibbard). Cognitive stimulation may be done in groups, and involves activities intended to increase general social and cognitive functioning (Belleville; Wenisch et al., 2006; Zarit & Zarit). Cognitive training is implemented individually or in small groups and involves specific, targeted exercises to increase cognitive functioning in activities of daily living (Belleville; Cicerone; Gordon & Hibbard; Zarit & Zarit). Interventions have been developed to address impairments in executive functioning, language, attention, visual perception, and memory (Bangirana, Idro, John, & Boivin, 2006; Cicerone; Franzen & Lovell; Gordon & Hibbard; Pierson & Griffith). Computer-assisted programs may be used to augment these techniques, and handheld computers may be used as compensatory aids to daily living (Bangirana et al., 2006; Franzen & Lovell; Gentry, 2008; Tesar, Bandion, & Baumhackl, 2005). When impairment is caused directly by brain injury, such as a stroke or physical trauma, the efficacy of cognitive interventions is not affected by the severity of the damage, although more damage slows the rate of learning (Gordon & Hibbard). The greater the intensity and duration of therapy, the greater the increase in cognitive functioning (Bode, Heinemann, Semik, & Mallinson, 2004; Gordon & Hibbard; Saxena, Ng, Yong, Fong, & Ko, 2006). To maintain benefits gained as a result of these cognitive interventions, clients should attend brief booster sessions as needed, and consult their therapists if they experience any significant changes in their daily lives (Gordon & Hibbard). Long-term psychotherapy should also be provided alongside cognitive interventions to provide education, promote awareness, and help with adjustment issues (Cicerone; Gordon & Hibbard; Ponsford, 2005). In addition, psychotherapy may be provided to address behavior problems associated with cognitive impairment (Benedict et al., 2000; Franzen & Lovell). Adequate nutrition and physical exercise have also been shown to be important in the enhancement of cognitive functioning, and thus should be addressed as part of the client's treatment regimen (Bangirana et al.; Pierson & Griffith). For more information on evidence-based cognitive rehabilitation strategies, see Cicerone.

Delirium. Delirium is a dangerous condition, as it is associated with high mortality rates. Research has been done on the prevention of delirium, particularly in the elderly who have higher prevalence rates of the disorder (Inouye et al., 1999; Trzepacz & Meagher, 2008). Inouye et al. implemented a prevention program targeting six risk factors for delirium in hospitalized elders: hearing impairment, sleep deprivation, visual impairment, cognitive impairment, dehydration, and immobility. The program decreased the incidence of delirium, as well as the duration of the episodes that did occur (Inouye et al.). Preoperative patient preparation and education have also been shown to be helpful in reducing rates of delirium (Trzepacz & Meagher). Postoperative passive music therapy may reduce the incidence of delirium in elderly patients (Trzepacz & Meagher). Primary prevention is the most effective strategy in reducing the frequency and complications associated with delirium (Inouye, 2006; Inouye et al.).

Timely identification and treatment of delirium are vital. The immediate priority is for medical professionals to determine the underlying cause of the delirium and treat it (Rabins, 1991; Trzepacz & Kennedy, 2005; Trzepacz & Meagher, 2008; Zarit & Zarit, 2007). In addition, environmental manipulation, treatment of behavioral symptoms, and psychosocial support for the client and family should be implemented (Inouye, 2006; Trzepacz & Kennedy;

Trzepacz & Meagher; Tune, 2000). If the physician is able to identify and alleviate the underlying etiology, delirium will subside, although recovery may be slow (APA-psychiatry, 2006; Inouye; Rabins; Zarit & Zarit). However, if the underlying source cannot be determined, the patient should be kept in a calm, dim lit room on close observation for 12–24 h, and may be given an antipsychotic to assist with relaxation (APA-psychiatry; Inouye; Zarit & Zarit). During the episode, the patient should be kept on close observation by medical staff, particularly in regard to fluids, vital signs, and oxygen level (APA-psychiatry; Inouye). Patients, their families, and other staff members should also be educated about the current delirium and its expected course (APA-psychiatry; Rabins; Trzepacz & Meagher). Manipulating the environment to be calming and reassuring may prevent worsening of the condition. This may be achieved through changing lights to cue day and night, using orienting items such as calendars, correcting auditory and visual impairments, regulating stimulation, and having familiar objects and people present (APA-psychiatry; Inouye; Rabins; Trzepacz & Kennedy; Trzepacz & Meagher; Tune; Zarit & Zarit). Patients should be reassured that their condition will pass, and should be reoriented frequently (APA-psychiatry; Rabins; Trzepacz & Meagher; Tune). Psychological interventions that can decrease cognitive disturbance include explaining of recent events, clarifying misperceptions, repeating information, and validating real events (Broshek & Marcopulos, 1999; Tune). To deal with affective reactions, the clinician may reduce feelings of isolation, acknowledge affect, encourage realistic hope, emphasize familiarity, and help the patient gain a sense of control (Broshek & Marcopulos). In some cases, electroconvulsive therapy may also be used to treat a delirium (APA-psychiatry; Coffey & Kellner, 2000; Dubovsky & Buzan, 2000). Physical restraints and pharmacotherapy should be avoided, as they may exacerbate the delirium, and may have particularly adverse effects in the elderly (Inouye; Rabins; Zarit & Zarit). However, if the person is a danger to themselves or others, antipsychotics may be used to ease the symptoms, except in the case of delirium due to alcohol withdrawal, where benzodiazepines would be prescribed (Dubovsky & Buzan; Rabins; Trzepacz & Meagher). It is important to note that management of a delirious patient is specific to the etiology, and thus treatments must be tailored to the individual case (APA-psychiatry). Once delirium has subsided, support should be provided to help the client adjust to what has happened and educate him or her on how to minimize risk of a future episode (APA-psychiatry; Inouye; Trzepacz & Meagher). Depression or posttraumatic stress disorder following the delirium may also need to be addressed (Trzepacz & Meagher).

Dementia. With development of medications that may slow the degenerative process of dementia, there is increasing emphasis on early diagnosis and intervention (Ritchie & Portet, 2006; Zarit & Zarit, 2007). Identification of Mild Cognitive Impairment (MCI), early-stage cognitive decline that may develop into dementia, also allows practitioners to work with the client and family members on coping skills and future planning that facilitates prevention of predictable problems that typically accompany dementia (O'Donnell et al., 2001; Vance & Burrage, 2006; Wenisch et al., 2006; Zarit & Zarit). When possible, clinicians should work with both clients and caregivers, individually and together in sessions, to educate them about the illness and address issues such as coping with memory loss, relationship changes, and feelings of grief (Miller & Reynolds, 2006; Zarit, Femia, Watson, Rice-Oeschger, & Kakos, 2004; Zarit & Zarit). A strong relationship with the caregiver(s) is vital, as with the progression of the dementia, it will be increasingly important to maintain therapy with them. If the client does not have social support, the therapist must obtain appropriate support that is in the best interests of the client (Zarit & Zarit). The primary goal of therapy with the client with MCI is to enhance

communication skills and decrease dysfunctional behavior, improving social interactions and self-image (O'Donnell et al.). Cognitive-behavior therapy has been shown to be efficacious in increasing quality of life and decreasing comorbid mood disorders such as depression and anxiety in clients in the early stages of dementia (Laidlaw, Thompson, Dick-Siskin, & Gallagher-Thompson, 2003; Scholey & Woods, 2003; Thompson, Wagner, Zeiss, & Gallagher, 1990). Programs such as cognitive stimulation, remediation, and training may be used to optimize cognitive functioning and delay decline (Belleville, 2008; Savorani et al., 2004; Wenisch et al.; Zarit & Zarit). Promotion of healthy habits, such as proper nutrition and abstinence from substance use, may reduce cognitive degeneration (Vance & Burrage). Memory strategies can also be used to preserve daily functioning (Troyer, Murphy, Anderson, Moscovitch, & Craik, 2007). Group therapy for clients that have been diagnosed with early-stage dementia has been shown to be beneficial for coping and decreasing feelings of isolation (Zarit et al., 2004; Zarit & Zarit). Reminiscence on intact memories encourages self-esteem, and an overall focus on the here and now promotes development of coping strategies (Zarit & Zarit). Group therapies with both clients and caregivers have also been shown to increase quality of life and decrease family conflict (Logsdon, McCurry, & Teri, 2006; Zarit et al.). Research into pharmacological primary prevention based on known risk factors and biomarkers, particularly for Alzheimer's dementia, is on the rise, and will hopefully decrease the prevalence of this disease in the years to come (Cummings, Doody, & Clark, 2007).

Traditionally, psychotherapy with clients who have dementia has been regarded as ineffective, particularly as it cannot arrest the course of the illness (Lichtenberg & Duffy, 2000; Zarit & Leitsch, 2001). However, advances in psychotherapy research with these clients have revealed benefits of several forms of therapy, including memory training, aromatherapy, validation therapy, pet therapy, milieu therapy, cognitive-behavior therapy, visual imagery and art therapy, reminiscence therapy, touch and massage therapy, cognitive rehabilitation, reality orientation, speed feedback therapy, music therapy, and environmental manipulation (Abraham, Neundorfer, & Currie, 1992; Desai & Grossberg, 2005; Forrest, 2008; Laidlaw et al., 2003; Lichtenberg & Duffy; O'Donnell et al., 2001; Ootani, Nara, Kaneko, & Okamura, 2005; Savorani et al., 2004; Teri & McCurry, 2000; Wilkins & Carr, 2000; Zarit & Zarit, 2007). As with MCI, cognitive rehabilitation programs may be used to enhance cognitive function (Belleville, 2008; Zarit & Zarit). With later-stage dementia, cognitive techniques become less relevant, but affective orientations may still be beneficial. Although verbal exchanges may be lacking in logical content, they can be emotionally meaningful to the client (Forrest; Lichtenberg & Duffy; Werezak & Morgan, 2003). Interactions with the individual should be supportive and involve aspects like humor and empathy (Werezak & Morgan). Identifying activities that are pleasant to the client is important in maintaining quality of life, and in severe clients may be assessed using the Pleasant Events Schedule-AD (PES-AD; Teri & Logsdon, 1991). In most cases, behaviorist techniques, particularly classical conditioning, reduce behavioral problems, and support coping skills and activities of daily living (Lichtenberg, 1999b; Lichtenberg & Duffy; Logsdon, Teri, & McCurry, 2006; O'Donnell et al.; Teri, 1996; Teri, Huda, Gibbons, Young, van Leynseele, 2005; Zarit & Zarit). The focus of treatment is contributing to temporary gains in mood, daily functioning, and behavior (Zarit & Leitsch). The physical and psychosocial environment has been shown to be very important for functioning and quality of life in people with severe dementia. Physical layout of living space should include memory aids and promote orientation and wayfinding; private space should be cognitively stimulating and personalized (Forrest; O'Donnell et al.; Werezak & Morgan, 2003). Setting up a positive environment like this reduces the need

for physical and chemical restraints (O'Donnell et al.; Werezak & Morgan). See Thomas (1996) for a description of The Eden Alternative, a conceptual framework for creating institutional settings that are comfortable and home-like (Tavormia, 1999). Group therapy is also effective with dementia patients, and is conducive to expressive therapies like music and art (Abraham et al., 1992; Lichtenberg & Duffy). Pharmacologically, cholinesterase inhibitors are the preferred form of treatment of cognitive impairment, although not all dementias are associated with degeneration of cholinergic markers (Apostolova & Cummings, 2008; Desai & Grossberg; Dubovsky & Buzan, 2000; Holtzheimer, Snowden, & Roy-Byrne, 2008; Lerner & Riley, 2008; Olazaran et al., 2004; Ritchie & Portet, 2006; Rongve & Aarsland, 2006; Wilkins & Carr; Zarit & Zarit). Psychotropic medications for reducing agitation and behavioral difficulties have had mixed results in terms of efficacy, and nearly always contribute to further cognitive and motor decline, and should be avoided where possible (Apostolova & Cummings; Dubovsky & Buzan; Holtzheimer et al., 2008; Zarit & Zarit). If medication is necessary, atypical antipsychotics may be considered to treat these symptoms, as they tend to have fewer side effects (Apostolova & Cummings; Holtzheimer et al.; Zarit & Zarit). Regardless of the approach to treatment, it is important that the practitioner recognizes that at best, outcomes may consist of only modest gains or delay of further decline (Zarit & Leitsch).

Family therapy and caregiver education are very important when working with clients with dementia, as caregivers play a large role in treatment, and this disorder often upsets the balance of relationships (Apostolova & Cummings, 2008; Forrest, 2008; Lichtenberg & Duffy, 2000; Miller & Reynolds, 2006; Teri & McCurry, 2000; Zarit & Leitsch, 2001). Caregivers generally experience physical, social, financial, and emotional losses; 90% report being emotionally affected, and 66% report depression (Desai & Grossberg, 2005). Therapy helps caregivers more effectively interact with the dementia client by increasing their well-being and promoting skill development in behavior management and coping. There also are interventions focused directly on helping the caregiver to support the dementia client, leading to more positive outcomes in patients, including delayed institutionalization (Apostolova & Cummings; Coon, Thompson, Steffen, Sorocco, & Gallagher-Thompson, 2003; Laidlaw et al., 2003; Logsdon et al., 2006; Teri, 1996; McCurry, Gibbons, Logsdon, Vitiello, & Teri, 2003; Mittelman, Roth, Haley, & Zarit, 2004; Teri et al., 2003; Teri, Logsdon, Uomoto, & McCurry, 1997; Teri & McCurry; Teri, McCurry, Logsdon, & Gibbons, 2005; Whitlatch, Zarit, Goodwin, & von Eye, 1995; Zarit & Leitsch).

Amnestic Disorders. In cases of amnesia that are due to reversible underlying etiologies, such as poisoning, malnutrition, and infections, amnesia typically subsides if the cause is properly treated by a physician (Taylor, 2007). In longer-term or permanent cases of amnesia due to head trauma and/or structural damage to the brain, symptoms may be reduced through rehabilitative techniques (APA-psychiatry, 2000; Franzen & Lovell, 2008). Internal strategies improve memory ability, whereas external strategies compensate for memory deficits through the use of aids (Dobkin, 2000; Franzen & Lovell; Troyer et al., 2007). Typically when one form of memory is impaired, another remains intact, and thus internal mnemonic strategies may be used to maximize utility of remaining skills (Cicerone, 2007; Franzen & Lovell). Visual imagery is commonly employed to assist in registration and retention of verbal information (Cicerone; Dobkin; Franzen & Lovell). Some techniques that may be used include peg mnemonics, the method of loci, and face–name association (Franzen & Lovell; Glasgow, Zeiss, Barrera, & Lewinsohn, 1977; Lewinsohn, Danaher, & Kikel, 1977). The efficacy of these strategies, however, is largely dependent on the nature of the brain damage as well as individual characteristics. Verbal mnemonic strategies may also be used with some clients, and involve exercises such as rhyming strategies,

spaced retrieval, and semantic elaboration (Cicerone; Franzen & Lovell; Troyer et al.). For clients who have difficulty registering written information, the PQRST approach may be used: Preview information, Question the information, Read actively, State the information over again, and Test retention by answering the questions that were written (Franzen & Lovell; Glasgow et al., 1977). Internal techniques are most effective in the long term, if there is contextual interference and intermittent, rather than constant, feedback throughout therapy (Dobkin). Cognitive rehabilitation involves both internal and external memory strategies designed to address attentional impairments, followed by impairments in encoding and recall of information (Dobkin). External memory aids may be used to compliment internal exercises, or may be used in place of them with clients with severe amnesia. Strategies should be practical and aimed at daily activities, as the goal of such techniques is to support daily functioning (Cicerone; Troyer et al.). Memory storage may be achieved through keeping a memory book that lists one's schedule of daily activities. Electronic storage devices such as personal digital assistants (PDAs) may also be used (Cicerone; Dobkin; Franzen & Lovell). External cues, such as timers and calendars, are very useful for informing the client when behaviors must be performed at a particular time (Cicerone; Dobkin; Franzen & Lovell; Troyer et al.). External strategies are most effective when the client is educated about them, followed up by initiation and maintenance of the new behaviors and recognized for the positive changes in his or her daily life (Troyer et al.). Studies have examined the efficacy of pharmacotherapy for memory impairment, and depending on the nature of the damage, some cholinergic and catecholaminergic medications have demonstrated reduction of attentional and memory deficits (Dobkin; McAllister, 2005). For any given memory intervention to be effective, there must be a thorough assessment to pinpoint the memory systems that need to be targeted, and interventions must be tailored to these and other individual characteristics (Glasgow et al.; Lewinsohn et al., 1977).

Mental Disorders Due to a General Medical Condition. Generally, treatment of mental disorders that result from an underlying medical condition is addressed by medical professionals. Once the cause has been alleviated, the disorder typically subsides. However, some disorders due to a general medical condition may have long-term or permanent effects, for example cognitive or memory dysfunction, the symptoms of which are usually addressed by mental health professionals (APA-psychiatry, 2000; Franzen & Lovell, 2008). Treatments of other disorders due to general medical conditions, for example sexual dysfunction, personality change, anxiety disorder, and mood disorder, are beyond the scope of this chapter. For more information on psychotherapy with clients with organic disorders, see Forrest (2008).

Substance-Induced Disorders. Treatment of substance-induced disorders is largely dependent on the particular case due to individual and environmental factors, the nature of the disorder, and the substance associated with the disorder (APA-psychiatry, 2006), although intoxication and withdrawal typically subside after removal of the substance from the system (Doctor, 2008). Depending on severity, clients experiencing symptoms of intoxication or withdrawal may require hospitalization to ensure appropriate treatment of medical symptoms (APA-psychiatry). Intoxicated clients should remain in a controlled environment with periodic reorientation, reassurance, reality testing, and decreased exposure to stimuli (APA-psychiatry). In the majority of cases, intoxication is self-limiting and will resolve naturally (APA-psychiatry). However, some substances are dangerous or may have been consumed in high doses, and may require removal from the body through methods such as gastric lavage and the administration of charcoal (Doctor). If necessary, drug effects may also be reversed by giving the client antagonists, or the client may be sedated if he or she is extremely agitated (APA-psychiatry). Specialized

medical treatments are often required in cases of toxin exposure (Doctor). Withdrawal symptoms may be treated pharmacologically with an agonist associated with the particular substance, as well as other medications that ease symptoms, such as benzodiazepines for alcohol withdrawal (APA-psychiatry). Withdrawal from particular substances, such as opioids, may require complex drug treatments and long-term agonist or antagonist treatments if there is a history of abuse (APA-psychiatry). Clients experiencing withdrawal should also be given reassurance and general support. As well, the patient and his or her family should be educated about substance use (APA-psychiatry).

Substance-related issues may sometimes lead to health complications, general impairment, and an array of secondary mental disorders (APA-psychiatry, 2000; Maxwell, 2005). For example, unless a client is treated with thiamine to reverse the effects of chronic alcohol use, he or she may develop Korsakoff's syndrome, a persisting amnestic disorder (APA-psychiatry, 2006). In addition, general medical conditions can develop as a result of substance use, and may in turn lead to the development of a mental disorder due to medical complications (APA- psychiatry; Maxwell). Behavioral disturbances may also result from substance use (APA-psychiatry; Maxwell). Therapeutically, substance-induced delirium, dementia, and amnestic disorders are generally addressed in the same manner as when these disorders result from different etiologies (APA-psychiatry). The treatment of other substance-induced disorders, such as sleep, psychotic, anxiety, and mood disorders, is beyond the scope of this chapter.

14.2.3 Mechanisms of Change Underlying the Intervention

Due to the biological nature of organic mental disorders, medical treatment is often the primary intervention. Specifically in acute cases of delirium, amnesia, substance-induced disorders, and disorders due to a general medical condition, symptom alleviation typically occurs through medical treatment of the underlying cause (APA-psychiatry, 2000, 2006; Doctor, 2008; Inouye, 2006; Rabins, 1991; Taylor, 2007; Zarit & Zarit, 2007). However, even in these cases, cognitive, behavioral, and affective interventions may be applied to address specific issues or decrease symptom presentation (Forrest, 2008). Chronic conditions, on the other hand, typically require psychological interventions for functional recovery or symptom amelioration.

Cognitive Impairment. Cognitive rehabilitation programs are tailored to the individual client, and may include interventions that involve environmental modification, compensatory mechanisms, or recovery of cognitive ability itself (Gordon & Hibbard, 2005). Environmental modifications improve daily functioning by tailoring the client's environment to his or her specific needs (Gordon & Hibbard). Compensatory approaches involve learning new skills or behaviors, and may involve the use of aids such as handheld computers (Franzen & Lovell, 2008; Gentry, 2008; Gordon & Hibbard). For example, skills training focuses on increasing cognitive functioning in daily life; thus, training is specific to tasks that the client will be performing, and rehabilitation occurs through acquisition of domain-specific knowledge (Cicerone, 2007). Direct interventions are intended to recover cognitive functions that have been lost (Gordon & Hibbard). Recovery depends on there being a range of neurological processes that can be used to complete a given task under a variety of conditions (Cicerone). When a client is motivated and actively participates in his or her cognitive rehabilitation program, reorganization of neurologic and cognitive processes may take place, as intra-systemic processes may take over the role of the damaged tissue and/or intact higher cortical centers may

influence lower levels of function (Cicerone; Franzen & Lovell). Specific cognitive areas may be targeted, known as process-specific remediation. Here, it is assumed that improvements in the specific function will generalize to similar cognitive areas (Cicerone). Comprehensive programs that involve psychotherapy, cognitive remediation, functional skills training, and individual and group treatments are the most effective (Cicerone; Gordon & Hibbard). Groups are particularly helpful in enhancing social skills and interpersonal functioning, and psychoeducation is crucial in helping clients to adapt to cognitive impairment (Belleville, 2008; Gordon & Hibbard; Zarit & Zarit, 2007). Comprehensive programs are effective because they improve overall functional application of intact cognitive abilities (Cicerone).

Delirium. The environmental modifications recommended in the treatment of delirium decrease symptom expression by reducing factors known to aggravate the condition (Trzepacz & Meagher, 2008; Tune, 2000). Reassurance and therapeutic conversations with the client work in a similar manner, as they reduce agitation and cognitive and emotional disturbance (Broshek & Marcopulos, 1999; Tune). Because clients experiencing an episode of delirium are cognitively impaired and confused, failure to provide orientation, reassurance, and a calm, structured environment may lead to further confusion or fear that may interfere with medical treatment and pose a risk to the patient and staff (Trzepacz & Kennedy, 2005).

Dementia. For the most part, therapeutic work with dementia patients is not intended to produce permanent change, but rather temporary gains in daily functioning, affect, and behavior (Zarit & Leitsch, 2001). Cognitive rehabilitation techniques for persons with dementia are used to optimize residual functioning (Lichtenberg & Duffy, 2000). Verbal communication remains important with severely impaired individuals because it is emotionally meaningful to them due to the nonverbal and subvocal aspects of these exchanges, and memory of affective experiences remains when cognitive recall does not (Forrest, 2008; Lichtenberg & Duffy; Werezak & Morgan, 2003). Dementia patients continue to experience emotions, and these emotions in turn affect their behavior (Werezak & Morgan). Treatments, such as pet therapy, music therapy, and touch therapy, have a calming effect on dementia patients, reducing agitation and therefore dysfunctional behaviors (O'Donnell et al., 2001). Even with the most severely impaired individuals, comfort and sensual pleasure can increase quality of life and should be provided as part of care (O'Donnell et al.). Adapting the physical environment for clients with dementia is important in reducing disorientation, confusion, and agitation (O'Donnell et al.; Werezak & Morgan). This is achieved through reducing over-stimulation and setting up an environment that promotes orientation, a sense of control, and social interactions (O'Donnell et al.; Werezak & Morgan). Behavioral interventions with dementia patients typically follow an ABC model – Antecedent, Behavior, Consequence (Zarit & Zarit, 2007). Once the triggers of the behavior have been identified, these can be avoided in order to prevent the behavior from occurring (Ford & Urban, 1998; Logsdon et al., 2006; Zarit & Zarit). Problem behaviors may also be maintained through the positive consequences that follow them. Therefore, identifying and removing this reinforcement should decrease the behavior (Ford & Urban; Zarit & Zarit).

Amnestic Disorders. Internal memory strategies aimed at the recovery of lost function work through the same neurological reorganization mechanisms as remediation of other cognitive deficits (Cicerone, 2007). Through a rehabilitation program, remaining memory functions can replace those that have been lost (Cicerone; Franzen & Lovell, 2008). For example, visual imagery strategies may be used with patients that have impairments in verbal memory (Frazen & Lovell). With clients with severe amnesia, internal strategies are typically ineffective

(Cicerone). Therefore, in these cases, and to compliment internal strategies in milder cases, external and compensatory strategies are common. These work through providing an immediate external reminder or cue – they do not require the client to use his or her memory to remember when or how to complete particular tasks (Cicerone; Dobkin, 2000; Franzen & Lovell; Troyer et al., 2007).

Mental Disorders Due to a General Medical Condition and Substance-Induced Disorders. Organic disorders falling under these two categories are addressed by treating the underlying etiology. Once the condition that is causing the neurological issue is eliminated, symptoms typically disappear (APA-psychiatry, 2000, 2006; Doctor, 2008). The mechanisms underlying treatments that may be used for remaining long-term effects, such as cognitive or memory impairment, are discussed elsewhere in the current section.

14.3   Basic Competencies of the Clinician

At a minimum, psychologists should be familiar with the signs and symptoms of organic disorder so that they can appropriately refer clients to certified clinical neuropsychologists. Psychologists wishing to work with patients with a range of organic disorders require knowledge in both neuropsychology and geropsychology due to the high incidence of these disorders in the elderly (Haley & Mangum, 1999; Lipowski, 1980, 1984; Seltzer & Sherwin, 1978; Taylor, 2007). If a clinician chooses to work with particular subtypes, depending on their nature, he or she may choose to focus on one field and supplement particular areas with knowledge from the other. For example, clinical neuropsychologists may choose to focus on geriatric neuropsychology, integrating competencies from geropsychology into their established knowledge of neuropsychology (Hannay et al., 1998). However, if a clinician wishes to work in pediatric neuropsychology, specialized knowledge of geropsychology is not necessary.

Competency in both neuropsychology and geropsychology will be covered in the following sections. It is assumed that practitioners already possess competency in general clinical practice in psychology.

Neuropsychology. Clinical neuropsychology is recognized as a practice specialty, and thus even basic competence requires specialized knowledge and training (Hess & Hart, 1990). Because clinical neuropsychology stems from the integration of clinical psychology and neuroscience, competent practice in this domain requires knowledge and skills in both areas (Hess & Hart). For a psychologist to work ethically with patients with organic disorders, he or she must have knowledge of brain function and organization, psychopathology and systemic pathology, clinical interviewing and history taking, a variety of assessment instruments and techniques of administration, specific interventions pertaining to this population, pharmacology, consultation, patient education, ethics, and effective strategies for working with families and institutions such as hospitals and schools (American Psychological Association [APA-psychology], 2008b; Bush, 2007; Hess & Hart). Psychologists who wish to practice with this population should have formal training in these areas. For example, the clinical interview alone requires a history of varied experience in neuropsychological assessment and in-depth knowledge of neuropsychology (Strauss et al., 2006).

Geropsychology. Although licensed psychologists possess skills that can be applied to their work with older adults, ethical standards dictate that psychologists working with this population should have some prior training and, ideally, supervised experience (APA-psychology,

2004; Haley & Mangum, 1999; Qualls, 1998; Zarit & Zarit, 2007). Basic knowledge may be obtained through self-study, graduate training, or continuing education (Qualls). At a minimum, such training should include information on psychopathology and the psychological, biological, and social changes that accompany aging, such as cognitive and sensory deficits, developmental issues, and physical illness (APA-psychology; Lewinsohn, Teri, & Hautzinger, 1984; Qualls; Zarit & Zarit). Clinicians should be familiar with the tests and procedures used to assess for, and diagnose, organic disorders in older adults, and should be aware of how to optimize conditions for testing with this population in order to obtain valid results (APA-psychology; Haley & Mangum; Lewinsohn et al., 1984; Zarit & Zarit). Psychologists should know how to tailor therapy to client characteristics through techniques such as pacing and accommodating sensory deficits (Lewinsohn et al.; Zarit & Zarit). They should also be familiar with specific interventions that have been shown to be appropriate with older adults with organic mental disorders (APA-psychology; Lewinsohn et al.). The clinician should have a basic understanding of pharmacology as it applies to organic disorders, and the potential effects of different medications on symptom presentation (APA-psychology). When working with this population, it is particularly important for clinicians to monitor their potential age-related biases (APA-psychology; Zarit & Zarit). Negative stereotypes may lead to over-pathologizing and unreasonably low expectations for therapeutic success, decreasing the quality of treatment and prevention (APA-psychology). On the other hand, some practitioners may tend toward a positive bias, minimizing negative attributions and thus preventing effective treatment (APA-psychology; Zarit & Zarit). Multicultural competency is crucial in working with this population as well, as factors such as sexual orientation, ethnicity, gender, and socio-economic status may influence symptom presentation and how assessment and treatment should be addressed (APA-psychology). A key factor in basic competence is being able to distinguish between clients who can be treated by the generalist versus those that should be referred to an expert in geropsychology (APA-psychology; Qualls).

14.4   Expert Competencies of the Clinician

Neuropsychology. Clinical neuropsychology is a practice specialty that is regulated by the American Board of Clinical Neuropsychology (ABCN) under the American Board of Professional Psychology (ABPP; ABPP, n.d.). A diploma from the ABCN is the primary credential recognizing a practitioner's competence in clinical neuropsychology (ABCN, 2007; ABPP, n.d.). Clinical neuropsychologists have expertise in using assessments and interventions with clients based on their knowledge of human behavior as it relates to normal and abnormal functioning of the central nervous system (American Academy of Clinical Neuropsychology [AACN], 2007; Hannay et al., 1998). Specialists in neuropsychology have in-depth knowledge in the core domains of this field of practice, including consumer protection, assessment, supervision, intervention, research, professional development, and consultation (Hannay et al.; Hess & Hart, 1990). Clinical neuropsychologists possess specialized knowledge of neuroimaging, neuropsychology of behavior, neuroanatomy, neurochemistry and psychopharmacology, neuropathology, effects of systemic conditions on the central nervous system, and the etiology, symptom expression, prognosis, and treatment of neurological and related disorders (AACN; APA-psychology, 2008b; Hannay et al.; Hess & Hart). Their clinical knowledge includes neuropsychological research design and analysis, neuropsychological assessment and intervention,

practical implications of neuropsychological disorders, and professional and ethical issues in neuropsychology (APA-psychology; Bush, 2007; Hannay et al.; Hess & Hart). Ethical issues of particular importance include autonomy, informed consent, issues in third party assessments, confidentiality, and test security (AACN; Bush). Clinical neuropsychologists have practical skills in a variety of areas. Within the domain of assessment, practitioners are proficient at gathering information and history taking, selecting assessment instruments, administering and scoring assessment tools, obtaining and integrating multiple sources of information, interpreting assessment results, providing diagnoses (differentiating between organic and psychogenic disorders, as well as between different etiologies of neurogenic disorders), writing up reports, planning treatments, and giving feedback to clients and/or their families (AACN; APA-psychology; Hannay et al.; Hess & Hart). In formulating a diagnosis, they are also aware of any factors that could potentially exacerbate or ameliorate the patient's presenting issue (AACN). In terms of treatment, neuropsychologists are able to specify intervention targets and needs, implement an intervention plan, and assess treatment outcome (APA-psychology; Hannay et al.). Some primary neuropsychological interventions include cognitive remediation, psychoeducation, psychotherapy, cognitive retraining, and environmental manipulation (APA-psychology). In both assessment and intervention with neuropsychological issues, practitioners must remain aware of cultural, disability, linguistic, and other socioeconomic and demographic variables, individualizing their work with the client accordingly (AACN; APA-psychology; Bush; Hannay et al.). Particularly with assessment, these factors may affect the meaning of test results or the tests may not be valid for the population, in which case supplementary information must be obtained (AACN). Competency is also required in the areas of consultation, research, teaching, and supervision (Hannay et al.). Once competence has been established clinical neuropsychologists should frequently engage in continuing education activities in order to maintain it (AACN; Bush; Hannay et al.). A key source that will assist in maintaining currency in this area in the immediate future is the revision of Lishman's (1998) classic text, scheduled to be published in 2009 (David et al., 2009).

Geropsychology. Clinical geropsychology is recognized as a practiced proficiency by the American Psychological Association, and signifies a higher level of competence than basic (APA-psychology, 2008a; Qualls, 1998). Although practitioners who are proficient in geropsychology are not considered experts, they have a high level of competence in working with this population, and constitute the majority of psychologists providing services to older adults (Qualls). According to the American Psychological Association, practitioners with this proficiency provide consultation, assessment, and intervention services to older adults in regard to a number of issues, such as capacity for decision making, behavioral problems, problems in daily living, and psychopathology. To be recognized as having this proficiency, one must have specialized knowledge in research and theory on aging, biological aspects of aging, social and psychological aspects of aging, and cognitive psychology, particularly in regard to normal and abnormal changes in cognition (APA-psychology, 2004, 2008a). Geropsychologists have a thorough understanding of assessment instruments that are psychometrically suitable for older adults, and are familiar with the theories and research behind them (APA-psychology; Haley & Mangum, 1999). They are comfortable with, and skilled at, gathering information from informants for assessment and treatment purposes (APA-psychology). These clinicians know how to accommodate sensory impairments, and any other potentially interfering factors, in order to obtain valid assessment results (APA-psychology; Zarit & Zarit). They have thorough knowledge of evidence-based treatment approaches with this population, as well as interventions

that may be used with caregivers and families (APA-psychology). Some distinctive interventions with this population include psychoeducation for caregivers, reminiscence therapy, expressive therapies, and grief therapy (APA-psychology). Geropsychologists know how to work within an interdisciplinary team, and are familiar with the role of each discipline, particularly within residential and inpatient settings (APA-psychology). They are familiar with psychotropic drugs and other types of medication, and their potential to interact with each other and with organic disorders (APA-psychology). Practitioners with this proficiency typically have some knowledge about behavioral medicine, such as how factors like nutrition and exercise can affect mental health in older adults (APA-psychology; Lichtenberg & Rosenthal, 1994). Geropsychologists should have worked through any biases or attitudes they previously held toward the elderly, and therefore have a realistic perception of the abilities and vulnerabilities of older adults (APA-psychology). They are knowledgeable in cross-cultural factors pertinent to the therapeutic process, and familiarize themselves with cohort experiences and how they may affect treatment (APA-psychology). Psychologists at this level of competence are aware of the common ethical issues pertaining to working with older adults, such as informed consent, confidentiality, and conflict of interest between the client and his or her legal guardian in making treatment decisions (APA-psychology; Whitehouse, 2000; Zarit & Zarit). They are also able to deal with such issues effectively (APA-psychology). Knowledge about ethics and legal issues related to death is important as well (APA-psychology). Finally, geropsychologists must remain current in their knowledge of new developments in the field through continuing education (Haley & Mangum).

With difficult cases, practitioners with proficiency in clinical geropsychology may need to consult a specialist with expertise in the area (Qualls, 1998). Because clinical geropsychology is not formally recognized as a specialty, expertise is determined through an informal process (Qualls). Expert status is reserved for those professionals who "devote their careers to advanced practice, research, and training in geropsychology" (Qualls, p. 24). These practitioners advance the field through setting standards for practice, providing consultation, training clinicians at the proficiency and specialty levels, and contributing to the development of new knowledge in the field (1998). Typically a clinician must be considered an expert to work as a mental health consultant in an institutional setting (Zarit & Zarit, 2007). Not only are specialized knowledge and skills required, but the therapist must also know how to function within a greater system that includes working with a variety of disciplines (Zarit & Zarit). For more information on working as a consultant in a geriatric inpatient or residential setting, see Zarit and Zarit.

14.5 Transition from Basic Competence to Expert

Neuropsychology. Because expert competency in clinical neuropsychology is formally acknowledged when a practitioner has obtained specialist certification from the ABPP, the process of developing expert competence in the field is aligned with fulfilling the requirements of this diploma. General requirements and recommendations for obtaining certification are described below. Please note that specific eligibility criteria may differ based on certain individual factors, such as when the person received his or her doctorate (ABCN, 2007; ABPP, n.d.).

Specialization is built upon existing clinical competency in a health service delivery predoctoral program (APA-psychology, 2008b; Hannay et al., 1998; "Reports of the INS," 1987). Therefore, training is obtained either through specialty programs at the predoctoral and

internship levels or through postdoctoral training in a specialized clinical neuropsychology program (AACN, 2007; ABPP, n.d.; APA-psychology; Hannay et al.; "Reports of the INS"). Continuing education is not adequate for establishing competence in clinical neuropsychology (AACN; Hannay et al.). To be eligible for certification, practitioners must possess a doctorate in psychology and have obtained the equivalent of 3 years of experience in clinical neuropsychology and 2 years of supervision in the area, either through a graduate internship or through a postdoctoral residency equivalent to 2 years of full-time education and training (AACN; ABCN, 2007; Hannay et al.; "Reports of the INS"). For graduate students wishing to specialize, internships should be completed through a CPA or APA accredited program (ABPP, n.d.; Hannay et al.), and may be initiated following 2 years in a Ph.D. program in clinical neuropsychology or clinical, counseling, or school psychology ("Reports of the INS"). Practicing clinicians wanting to specialize must have a Ph.D. in one of these areas, or have achieved equivalency through postdoctoral respecialization ("Reports of the INS"). The internship or residency should involve direct neuropsychological services for at least 50% of the time, with interns spending at least 20% of their time in general training in clinical psychology, and postdoctoral practitioners devoting at least 25% of the time to clinical research ("Reports of the INS"). Internships and residencies should be associated with a hospital setting that has neurological/neurosurgical services, as a psychiatric setting alone will not offer the same degree of experience in neurology ("Reports of the INS"). Practicum training must include training in neurological diagnosis, consultation to neurological/neurosurgical services, consultation to psychiatric or medical services, consultation to clients and referral sources, neuropsychological interventions, and neuropsychological assessment, interpretation, and report writing ("Reports of the INS"). Experiential training should occur in each of these areas, with sufficient exposure to work with neurological patients as well as patients with psychiatric conditions and medical patients with neurobehavioral disorders ("Reports of the INS"). Upon completion of the residency or internship, the practitioner is expected to have participated in scholarly activity and is expected to demonstrate advanced knowledge of brain–behavior relationships and advanced skill in assessment, treatment, and consultation with professionals and neuropsychological patients (Hannay et al.; "Reports of the INS"). He or she must also be eligible for licensure for independent practice, as a license is required to apply for certification through the ABPP (ABCN; ABPP, n.d.; Hannay et al.). ABCN then determines if the candidate is eligible for certification, and if the application is accepted, the practitioner completes a written exam, work samples, and an oral exam (ABCN; ABPP, n.d.). For more detailed information regarding eligibility and the application process, see ABCN. Information regarding education and practicum training in clinical neuropsychology may be obtained through the American Psychological Association Division 40 Web site (www.div40.org/training/index.html). For further information on competence in clinical neuropsychology, see Hannay et al.

Geropsychology. There are three primary strategies for obtaining proficiency in geropsychology: continuing education/respecialization programs, readings, and supervised practice (APA-psychology, 2004, 2008a; Qualls, 1998). There are several workshops and conferences that provide continuing education in geropsychology (Qualls). Psychologists in Long-Term Care (PLTC) also provide training to promote development of consultation, therapy, and assessment skills in working with older adults (APA-psychology). On top of pursuing education, psychologists wanting to gain proficiency in geropsychology should consult the published

literature within the discipline. Practice handbooks, conference summaries, and books are available for practitioners seeking knowledge on research and practice in the field (Qualls). For a list of some valuable resources in this area, *see Psychological Services in Long-Term Care Resource Guide* (Duffy, 2006). Qualls has also identified some useful journals, including the *Journal of Clinical Geropsychology*, *Journal of Mental Health and Aging*, *Clinical Gerontologist*, *Aging and Mental Health*, *The Gerontologist*, *International Journal of Aging and Human Development*, and *Psychology and Aging*. In addition to continuing education and self-study, the practitioner seeking proficiency in geropsychology must obtain supervised clinical experience (Qualls). He or she must have at least 100 h of supervised client contact at the pre- or postdoctoral level of training, including experience in interviewing, assessment, and treatment in a variety of settings (Qualls). Through this experience, the practitioner should become familiar with treatment institutions used by the elderly, and with working with other disciplines frequently involved in the treatment of older adults (Lichtenberg, 1999b; Qualls). For students wishing to pursue a career in this field, training in clinical geropsychology is provided in some graduate programs (APA-psychology; Lewinsohn et al., 1984). Further information on continuing education and training opportunities may be obtained through Division 20 (Adult Development and Aging; apadiv20.phhp.ufl.edu) and Division 12, Section II (Clinical Geropsychology; www.geropsych.org) of the American Psychological Association (APA-psychology; Qualls). For additional details on competency in geropsychology, see Santos and VandenBos (1982).

14.6 Summary

A variety of diverse mental illnesses are subsumed under the category of "organic disorder." Although the DSM-IV abandoned this terminology so that all mental disorders would be acknowledged as involving brain function, it remains that the primary feature of this class of disorders is their medical origin. Proper assessment and diagnosis is essential, as leaving organic disorders untreated may lead to further deterioration or death. Most organic disorders are maintained by the underlying biological cause, and thus treatment of that cause is an important factor in ameliorating the condition. However, a biopsychosocial approach to treatment is required to address all symptoms, particularly as organic disorders often have affective and relational consequences as well. Psychotherapy and cognitive rehabilitation strategies have been shown to be effective with a variety of acute and chronic organic disorders. Although therapeutic interventions with chronic degenerative conditions, such as Alzheimer's dementia, cannot produce permanent change, they can optimize the person's functioning and increase quality of life. In other cases, such as moderate amnesia, memory functions that have been lost may be recovered through neurological reorganization. Each individual case is unique depending on the factors involved in the damage and other personal, relational, and environmental traits. Thus, clinicians that practice with this heterogeneous population must be very knowledgeable and experienced. Unless they choose to specialize in a particular area of neuropsychology, practitioners should have competence in both geropsychology and neuropsychology. Maintenance of competence in this area is vital, as research in this field continues to grow. We are bound to see continuing developments in this area as our knowledge of organic and other psychiatric illness increases.

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15 Partner Abuse

K. Daniel O'Leary · Heidi Lary Kar

Abstract: Partner violence was almost unknown in the 1960s, but the field of intimate partner violence (IPV) has become widely known and there are now a number of specialty journals that cover this topic. The early stages of the field involved major surveys about the prevalence of IPV and many studies on correlates and predictors of IPV. It is now known that IPV occurs in about 10% of the general populations of men and women and that there is a clear need to assess for IPV in clinical populations. Fortunately, there are measures of IPV, Fear of Partner, and Injury, and these assessment instruments can be used by any clinician. Treatment of IPV for men mandated by courts to intervention programs has a small but significant effect over and above monitoring by the courts, but there is a strong need for treatment of differing levels of aggression. It is quite possible that treatments could be successful for men and women who engage in infrequent physical aggressive to their partners and who do not make them fearful or injure them.

Clinicians need to know the ethics of reporting of partner abuse, how to develop safety plans with a client, availability of local shelters, how and when to treat substance abuse, and when to treat marital problems. There is no one size fits all treatment, and some low level IPV can be treated conjointly whereas severe IPV may require both group and/or individual treatment for the perpetrator. Careful assessment and case conceptualization regarding risk factors for the IPV are needed to determine the best treatment options.

15.1 Overview

Partner aggression was largely ignored by mental health professionals in the 1960s. In fact, our search of Psych Literature indicated that there were only five articles about partner abuse in the 1960s, but there were 74 articles in the 1970s (Poggi, Vander Ven, & O'Leary, 2009). Further, articles about wife abuse in the 1960s basically involved explicit or veiled blame of the wife because of frigidity and aggressiveness. For example, Snell, Rosenwald and Robey (1964) characterized the family structure of men whose wives reported an assault as one in which the husband's passivity, indecisiveness, and sexual inadequacy and the wife's aggressiveness, masculinity, frigidity, and masochism allowed the couple to have a working equilibrium.

Fortunately, in 1979, there were two important books published regarding partner aggression. First, Murray Straus, Richard Gelles, and Susan Steinmetz published their book, *Behind Closed Doors: Violence in the American Family*. This book presented the first representative sample survey in the USA of physical aggression directed toward intimate partners (IPs). Unexpectedly, the study showed that approximately 12% of men *and* women in the past year had engaged in physical aggression against their partners. This book served to bring the attention of physical aggression and violence in the family to the fore because it used a representative sample. After the Straus et al. book, one could no longer say that physical aggression and violence at home were only seen in family memebers who are poor

and who have relatively low levels of education. Straus et al. showed that while there was a slight association between lower socioeconomic levels and physical aggression against a partner, such aggression occurs at all socioeconomic levels. In addition, as has been shown by other national surveys, physical aggression against partners occurs in about 10% of the general population and it occurs in considerable higher percentages in younger populations.

The second book to have a major impact on the field was Lenore Walker's now classic work, *The Battered Woman* (1979), in which she showed how women become entangled in a "cycle of violence." Initially, there is closeness, but that is followed by arguments and sometimes physical aggression. Following "fights," the male often apologizes albeit while not taking full responsibility for his actions. Walker believed that without any major intervention, abuse and misuse of power and control tactics will not stop. While there certainly are instances in which violence desists, in many instances there is persistence of violence as Walker argued. In some of our early work with couples from the community, we showed that of the men and women who engage in physical aggression at premarriage, about half of them were not physically aggressive at 18 months into the marriage (O'Leary et al., 1989), and thus there appeared to be considerable desistance or cessation of aggression. However, when physical aggression was assessed at all of the various points across the first 30 months of marriage, we found very considerable stability. More specifically, stability of physical aggression was examined in newly married couples who were assessed 1 month prior to engagement and again at 6, 18, and 30 months postmarriage (Lorber & O'Leary, 2004). Over 76% of men who were physically aggressive during the engagement period were physically aggressive at one or more of the next three assessments across the initial 30 months of marriage. Nearly 62% were severely aggressive at one or more assessments. Thus, Walker's interview and retrospective data led to conclusions in the late 1970s that were upheld much later with longitudinal data that did not exist in the late 1970s and early 1980s.

Fortunately, there was a grassroots movement that helped gain recognition of partner aggression and abuse. Basically, feminists and grassroots organizers helped awaken the public to the issue of domestic violence (Schecter, 1982) when mental health professionals ignored it. Given that some early mental health professionals characterized abused women as masochistic (Hilberman, 1980) and some others blamed wives for their husband's violence, a divide occurred between mental health workers and personnel who staffed shelters and services for battered women.

Since the 1990s, there has been a veritable explosion of research and scholarly activity on the issues of physical aggression in intimate relationships. There are now at least five journals that cover partner aggression, namely the *Journal of Family Violence*, *Journal of Interpersonal Violence*, *Violence and Victims*, and *Violence Against Women*. In addition, *Partner Abuse*, appeared in 2009. Moreover, mainstream journals in psychology, psychiatry, and medicine publish articles on partner abuse. Specifically, the American Psychological Association journals, the *Journal of Consulting and Clinical Psychology* and *Family Psychology*, often publish articles on family violence. In addition, the most cited journal of all in the health and mental health field, *The New England Journal of Medicine*, has addressed partner abuse and the need for physicians to address the issue of domestic violence as a health issue (Eisenstat & Bancroft, 1999).

Partner abuse has been a highly politicized field, but it has grown less so as there is an increasingly large knowledge base and as facilities for abused women have become very

common. Further, now many states even have treatment programs for abused men as well as for abused women. The increasing knowledge base has been seen most clearly in research on correlates and risk factors for partner aggression/abuse. The progress towards prevention and treatment of partner abuse has received less research attention, but knowledge about interventions for batterers has been significant even if sometimes depressing because of the very small effects of such interventions. The growth of research on etiology and treatment is such that individuals need to develop competencies in the assessment and treatment of partner abuse, and this chapter is designed to alert clinicians about the necessary skills that one should acquire to assist men and women in relationships characterized by physical aggression and abuse.

15.1.1 Recognition of Symptoms and Their Assessment

The distinction between partner aggression and partner abuse is not simple, but like many other problems or disorders, there is a need to distinguish between the rather commonly occurring physical aggression in intimate relationships and the more serious kinds of aggression called abuse. Jacobson and Gottman (1998) made a distinction between the common couple aggression and battering on the basis of the presence of fear of the partner and the presence of injury. According to them, fear of partner and/or injury had to be present for the problem to be called battering or what some call abuse. Nonetheless, like most other psychological problems, assessment on a continuum is necessary for the field to progress reasonably, and this chapter is designed to assist the clinician in knowing what to assess in evaluating partner aggression/abuse in an individual or a couple.

Physically Abusive Behavior. Occurrence and extent of physically aggressive behavior can be detected through interview and self-report methods. A wide variety of measures had been developed to assess physically aggressive behaviors against an IP. A review of such measures along with related relationship measures appears in an excellent resource book by Rathus and Feindler (2004), entitled: *Assessment of Partner Violence: A Handbook for Researchers and Practitioners*, and The Centers for Disease Control also published a compendium of measures used to assess intimate partner violence (IPV) of both a psychological and physical nature (Thompson, Basile, Hertz, & Sitterle, 2006). Various measures of physical aggression against a partner will not be reviewed here, but the most widely used measure of such will be discussed.

The most widely used measure to assess physical aggression in intimate relationships is the Conflict Tactics Scale (CTS) developed by Straus (1979). The measure was designed to be used both as a self-report of physical aggression toward an IP as well as a report of the extent to which the respondent was the recipient of acts of physical aggression by an IP. Because of the very widespread use of this measure, it is reviewed herein. This measure has three "warm up items" used to prompt the respondent to indicate the extent to which he or she discussed issues calmly, gotten information to back up his or her side of things, and brought in, or tried to bring in, someone to help settle things. After these three warm up items, there are six items used to assess psychological aggression such as insulted or sworn at partner, threatened to throw something at partner. Finally, there are eight items to assess physically aggressive behavior toward an IP such as slapped his or her partner and pushed, grabbed, or shoved his or her partner.

This measure has been used in hundreds of studies on dating and marital violence, and it was designed to be used in community and population surveys of physical aggression in families in the USA. The measure became well-known because it was the first of its kind to be used in a population-based survey (Straus, Gelles, & Steinmetz, 1980), and variations of it have been used in hundreds of studies of IP aggression. For example, it was used in a survey of partner aggression in the US Army by Pan, Neidig, and O'Leary (1994) in which over 11,000 men were sampled at 37 army bases in the USA. It was used by Schafer, Caetano and Clark (1998) in a population-based survey of 1,635 individuals of IPV in the USA, and it has been used in a Center for Disease Control population-based survey of 8,000 individuals (Tjaden & Thoennes, 2000).

There is a revision of the CTS and the revision includes more items and a sexual-abuse scale (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). The physical aggression measure of this scale has quite reasonable partner agreement (O'Leary & Williams, 2006), especially when partner agreement about physical aggression is compared to how partners negotiate positively on the Negotiation Scale of the CTS as well as on positive behaviors of the Dyadic Adjustment Scale (Spanier, 1976). Internal consistency measures of the aggression scale for both perpetration and victimization were in the 0.70 range, and Kappa agreement on aggressive acts between husbands and wives in a representative sample of parents of young children was 0.47 for men and 0.45 for women. Overall agreement representing both occurrence and nonoccurrence agreement was 0.79 for men and 0.76 for women. Pearson agreement was 0.47 and 0.44 for men and women, respectively.

Psychologically Abusive Behavior. Though psychological aggression has not received as much of attention as physically aggressive behaviors, psychologically aggressive behaviors can also be measured reliably. Various assessment measures of psychological aggression were reviewed by O'Leary (2001). Rathus and Feindler (2004) have also reviewed different measures of psychological aggression. There is no single measure of psychological aggression that has received the research attention of the physical aggression scale of the CTS, and the particular scale of interest should be related to the theoretical constructs and clinical interests at hand. For example, if one is interested in the extent to which battered women in a shelter have been psychologically abused, one needs to have a measure which will assess factors like financial control (takes car keys, closes bank and savings accounts, restricts and/or monitors phone access, makes daily demeaning comments to partner). On the other hand, if one wishes to assess psychological aggression in a sample of high school dating partners, the type of psychological aggression will be different than that used against women in a shelter. More specifically, one would want to know if the partner tries to restrict access to friends, tries to influence/control the clothing one wears, and demeans the partner by calling the partner names.

One of the most commonly used measures of psychological aggression is the Tolman Maltreatment Against Women scale (Tolman, 2001). This scale was developed to assess psychological aggression against women, though the scale has been modified to measure psychological aggression against men also (O'Leary, Slep, & O'Leary, 2007). The scale includes items like "tried to convince me that I am crazy, threatened to have an affair, threatened to leave the relationship, threatened to take the children away, restricted the use of my car, kept me from getting the care I needed, and ordered me around". This scale has acceptable psychometric properties of internal consistency (O'Leary et al., 2007; Tolman, 1989; Tolman).

The CTS (Straus, 1979), as well as the Revised Conflict Tactics Scale (Straus et al., 1996), also has a Psychological Aggression Scale that has excellent internal consistency (O'Leary & Williams, 2006; Straus et al.). The original scale includes eight items like insulted or sworn at you, sulked or refused to talk, stomped out of the house, did something to spite your partner, threatened to hit or throw something at partner, threw, hit, or kicked something. This scale has been shown to be predictive of physical aggression in young married couples where no physical aggression yet occurred (Murphy & O'Leary, 1989). The revised CTS psychological aggression scale of the CTS has not been the subject of as much research as the original CTS, but one would expect that the revised scale will do as well or even better than the original scale.

Injury. The Revised Conflict Tactics Scales has a measure of injury, and we have found it to be useful. The vast majority of physically victimized men and the majority of physically victimized women in a representative sample do not report any injury (Lary & O'Leary, 2008). More specifically, in a representative sample of parents of young children of those participants self-reporting any physical victimization, there were no significant gender differences in those reporting any injury (27.9% for women and 27.4% for men). Among female participants who reported experiencing any injury in the last 12 months, 91.9% reported experiencing moderate injury only and 27% reported experiencing severe injury. Among male participants reported any injury in the last 12 months, 95% reported moderate injury and 12.2% reported severe injury.

While the majority of physically victimized women in a representative sample did not report injury, it was the case that injured women were much more likely to be depressed than noninjured women. That is injured women and men were more likely to have elevated depression scores than noninjured women. Thus, the impact of injury has adverse effects for both men and women.

A clinician should always ask client about the presence of injury because it is the clinician's obligation to protect clients and know about the extent, severity, and consequences of physical aggression (O'Leary, 2008). It is the clinician's responsibility to use information about the extent and consequences of physical aggression to be able to develop a safety plan to prevent injury or harm to a client.

Fear of Partner. Fear of partner is also a factor that should be assessed by all clinicians since fear of partner is clinically and empirically significant. Fear of partner's future abuse is one of the best predictors of future aggression by the partner (Heckert & Gonfolf, 2005). In fact, in one study, fear of partner was a better predictor of future aggression than a set of 25 risk factors drawn from the literature (Weisz, Tolman, & Saunders, 2000). In addition, it is important to know about the extent of fear of partner because the kinds of intervention chosen should be based at least in part on knowledge of the fear a client has of his or her partner. Fear of partner can be assessed reliably; a 25-item self-report questionnaire has high internal consistency on measures of physical/sexual abuse (alpha = 0.72) and emotional abuse (alpha = 0.90) (Cohen & O'Leary, 2007). Fear of partner can be through self-report and/or interview with straightforward questions like "How much do you fear your partner will hurt or engage in the type of behaviors he or she has engaged in previously? As we have shown, women and men fear the specific behaviors that their partners used in the past (Kar & O'Leary, 2009). Further, women reported more fear of the specific behaviors that their partners engaged in than men, and physically victimized women reported more overall fear of their partners than physically victimized men.

15.1.2 DSM Diagnosis and Its Potential Impact

Partner abuse was first addressed in the DSM IV, and it appears that it will continue to be recognized in DSM IV. O'Leary and Jacobson (1994) wrote the chapter, Partner Abuse, for the DSM IV supplement, and the specific diagnosis, Physical Abuse of Adult, is a V code (V 61.1 with a specifier 995.81 to designate if the focus is on the victim). The overall area in which physical abuse is covered is under the overall rubric, Problems Related to Abuse or Neglect. However, the specific criteria for the various diagnoses subsumed under the rubric Problems Related to Abuse or Neglect were not contained in the DSM IV itself, but rather in a series of chapters in *DSM-IV*® *Sourcebook*, Volume 3. It is unclear how many individuals have received treatment from mental health professionals, and, in turn were reimbursed by insurance companies for matters or abuse – either as a perpetrator or as a victim. However, it is important to have a diagnosis under which an individual may obtain legitimate reimbursement from an insurance company for matters of abuse, since victims and perpetrators are sorely underserved.

One reason why the process of making official diagnoses and individuals receiving insurance reimbursement may be slow is that many individuals who work in programs for abused wives and physically abusive husbands are not licensed mental health professionals. In fact, many men who conduct groups for "batterers," are formerly abusive men. In addition, battered women often receive services from individuals who have been abused, but who are not clinical psychologists or social workers. Further, there was some opposition by service agencies to having an official diagnosis because of the concern that any diagnosis might lead men to be able to be less responsible for their aggressive behavior. However, if agencies can get insurance reimbursement for services provided to clients, they may gradually move to hiring licensed mental health workers to help maintain the agencies that serve men and women in situations characterized by physical aggression and abuse. That is, there could be financial advantages to the use of DSM diagnoses and licensed mental health professionals.

Of course, another specific advantage of an official diagnosis is that researchers could select individuals for various research projects who have the specific diagnosis, partner abuse. Classification is an initial important step in any research endeavor, and the use of specific diagnoses will allow for potential replicability across clinics and laboratories. Fortunately, there is reasonably good data on the diagnosis of partner abuse, and it appears that DSM V will likely have an official diagnosis code that covers IP aggression or partner abuse (Heyman & Slep, 2006). Further, there has been pressure by some professionals in the Division of Family Psychology and the Association for the Advancement of Cognitive and Behavior Therapy to include the diagnosis of partner abuse in a section of the DSM IV with both the diagnostic label as well as the criteria for diagnosis.

15.2 Maintenance Factors of the Disorder or Problem

Prediction of partner aggression has been the subject of over 2 decades of research, but the bulk of that research is correlational not longitudinal. However, there are some longitudinal studies of young married or engaged couples that do involve prediction of first instances of physical aggression or prediction of repeated aggression. Because the research on correlates and risk factors for partner aggression is so voluminous, it is worthwhile to provide some overall conceptual rubrics for placing these risk factors in context.

There are various theoretical conceptualizations for multivariate analyses of partner aggression but they can be broadly classified in terms of the following:

I. Cultural/demographic variables
   Income
   Education
   Attitudes and laws supporting aggression against women/partners

II. Family of origin variables
   Observation of violence
   Direct target of violence

III. Individual variables
   Personality
   Mental problems/disorders
   Substance abuse

IV. Relationship variables
   Relationship discord
   Communication problems
   Psychological aggression

O'Leary et al. (2007) used variables from each of the above four categories to test a multivariate model of partner aggression in a sample of 453 randomly selected parents of young children from Long Island, New York. Twenty-five variables have significant associations with partner aggression, but they then assessed how those variables interacted with one another, and tested causal models of partner aggression for both men and women. They found that demographic variables like young age and lower income levels had a small but significant association with partner aggression for both men and women. Similarly, family of origin variables also had small but significant associations with perpetration of partner aggression both for males and females. Individual variables like alcohol use and impulsivity had significant associations with partner abuse, but the relationship variables like marital discord, dominance, and jealous behaviors had the strongest associations with partner aggression.

Dutton (1995) used the nested ecological theory, a set of propositions espoused by Urie Bronfenbrenner to predict educational outcomes, to account for partner violence.

The nested ecological theory has four levels of variables as follows:

I. Macrosystem: cultural values and beliefs
II. Exosystem: formal and informal social structures such as friendship, workplace and support groups
III. Microsystem: characteristics of immediate setting in which the abuse takes place such as the family unit; relationship dynamics; antecedents and consequences of abuse
IV. Ontogenetic level: individual factors of the perpetrator of aggression

Testing models of partner abuse requires that there be specific measures of the constructs in the models, and often the models are too complex to be fully tested. However, Stith et al. used the nested ecological theory of Dutton to help them select variables to be tested in a multi-variable meta-analysis of partner abuse. Therefore, they used measures that could be used by clinicians. They found large effect sizes for prediction of perpetration of partner abuse and

five risk factors (emotional abuse, forced sex, illicit drug use, attitudes condoning marital violence, and marital satisfaction). They found moderate effect sizes for perpetration of partner abuse and six risk factors (traditional sex-role ideology, anger/hostility, history of partner abuse, alcohol use, depression, and career/life stress). The researchers also evaluated predictors of physical violence victimization and found a large effect size between physical violence victimization and the victim using violence toward his or her partner. Moderate effect sizes were found between female physical violence victimization and depression and fear of future abuse.

Capaldi, Shortt, and Kim (2005) follow a dynamic developmental systems approach to account for partner violence. This model uses four developmental phases with risk factors in each. Specifically, in childhood and adolescence, there are unskilled parenting and parental antisocial behavior and depression. In adolescence, there are deviant peer associations, and adolescent conduct problems and depressive symptoms. In young adulthood, there is at risk couple partnering, and in young and later adulthood, there is aggression to partner and unskilled relationship processes. In addition, the stage of development of both the individual and the couple as reflected in the age of each of the partners and the length of the relationship is important.

Riggs and O'Leary (1996) used two overall sets of variables to predict dating aggression, namely background and situational variables. Under these two major sets of variables were a number of subvariables. Background variables included factors like violence in the family of origin and aggressive personality style while the situational variables included factors like relationship satisfaction, intimacy, communication skills, alcohol abuse and aggression of the partner. Riggs and O'Leary found support for the background and situational model of courtship aggression. With 345 college undergraduates (232 women, 113 men), there was support for background-situational model and for both men and women, dating aggression was directly related to the individual's attitudes about dating aggression, history of aggressive behavior, and conflict within the relationship. However, the predicted association between family of origin violence and attitudes toward aggression and general aggressive behavior was found only among women. Among men, the predictors explained more than 60% of the variance in the latent variable of relationship aggression; among women, 32% of the variance was explained. In short, the situational variables explained more of the variance than background variables. Luthra and Gidicyz (2006) also evaluated the Riggs and O'Leary model of courtship violence with a sample of 200 college students and found that the model accurately classified 83% of aggressive women but only 30% of the aggressive men.

Research on IP aggression was extended to premilitary experiences of IPV among US navy recruits by White, Merrill, and Koss (2001), who found support for the Riggs and O'Leary (1989) model of courtship aggression with over 1,000 males and 1,000 females. The situational components explained more variance than did the background components; and for both women and men, the amount of variance accounted for was almost tripled after the addition of the situational factors. Partner aggression contributed to a substantial increase in the amount of variance. Partner's verbal aggression was the single best predictor of aggression, and partner's physical aggression was the second-best predictor. The situational component substantially increased the predictive power of the model.

Dutton (2007) has a model whose core is Borderline Personality Organization (BPO), but like most other models it also has family of origin variables, specifically rejection by mother and rejection by father. The core variable, BPO, is held to lead to anger, and verbal and physical abuse.

BPO does not refer to borderline personality but rather a set of three factors labeled: (1) identity problems (I feel empty inside; I find it hard to describe myself), (2) reality testing problems (I do things which get other people upset and I do not know why such things upset them; I hear things that other people claim are not really there), and (3) primitive defense problems (It is hard for me to trust people because they so often turn against me or betray me; uncontrollable events are the cause of my difficulties). In fact, Dutton presented evidence for this model with 160 males who were physically abusive to their wives and with 46 males who were not abusive to their wives. In both cases, the BPO was associated with abusive behavior though on the smaller sample, it was not associated with physical abuse but rather psychological abuse.

Stuart and Holtzworth-Munroe (2005) tested a model of partner aggression and they found that impulsivity led to marital discord and aggression in a sample of community men. And, in a sample of men arrested for domestic violence, antisocial behavior of the perpetrator led to the trait anger; in turn, the trait anger led to relationship discord and psychological aggression of the perpetrator. In short, there is some evidence that impulsivity leads to aggression against partners, although the association does not always exist and may be measure-dependent. Finally, there is evidence from Stuart et al. as well as others that antisocial personality traits predict partner aggression.

Because relationship discord or marital discord has been seen as such a major risk factor for partner aggression, marital discord was the subject of a separate meta-analysis used to predict partner aggression. Stith, Smith, Green, and Ward (2008) conducted a meta-analysis investigating the relationship between marital satisfaction/discord and IPV in heterosexual relationships with 32 articles. There was an overall small-to-moderate effect size (−0.27) that supported a significant and negative relationship that existed between marital satisfaction/discord and IP aggression. However, they also showed that standardized measures of marital discord like the Dyadic Adjustment Scale (Spanier, 1976) and the Index of Marital Satisfaction (Hudson, 1982) had larger effect size (−0.31) than nonstandardized measures (−0.21).

Multivariate models that have been evaluated are clearly different but not necessarily conflicting. And, there certainly is a need for more such evaluations and evaluations that will contrast the predictive power of various risk factors. It is abundantly clear that there is no single cause of IP aggression, and that our ability to have data from different laboratories on the predictive value of various risk factors will be very useful. Hopefully, in the next decade, there will be empirical evaluations of different though not necessarily conflicting models of partner aggression.

15.3 Evidence-Based Treatment Approaches

There has been a number of reviews of treatment approaches to partner aggression, and the overall conclusion that can be reached from those reviews is that there is a very small treatment effect that is obtained when one compares court-ordered programs for batterers with court monitoring (Babcock, Green, & Robie, 2004). In fact, based on the experimental studies, the effect size (d) due to treatment was only 0.09 and 0.12, based on victim report and police records, respectively. As the authors reported, the effects size obtained means that treatment was responsible for an approximately one tenth of a standard deviation improvement in recidivism. Based on partner's reports, batterers who received treatment had a 40% chance of being successfully nonviolent, and if batterers did not receive treatment, the men had a 35% chance of maintaining nonviolence. Thus, there was a 5% increase in success rate attributable

to treatment. To a clinician, this meant that a woman was 5% less likely to be reassaulted by a man who was arrested, sanctioned, and went to a batterers' program than by a man who was simply arrested and sanctioned.

The effect size obtained could be seen as so small as to suggest that psychological treatments are not worth the cost and effort needed to make them happen. In fact, whether one thinks treatment programs for batterers should be supported depends upon the importance one places on a 5% reduction in partner aggression. As Babcock et al. noted, while a 5% decrease may appear insignificant, this small treatment effect would equate to "approximately 42,000 women per year no longer being battered" (p. 1044). In addition to providing an analysis of the overall effects of intervention programs for batterers, Babcock et al. also evaluated the relative effects of the Duluth model and a cognitive-behavioral model of interventions for partner aggression. No differences were found for these treatments that used police records or partner reports of partner aggression. Thus, the two major interventions used to treat partner aggression were not significantly different from one another.

One interpretation of these data is that no treatment is very successful but another interpretation is that the legal intervention and the monitoring of the court by probation officer visits to the home of the woman who was victimized is quite successful. The success can be judged by the fact that approximately 60% of the men do not continue to engage in any physical aggression against their partners after a court intervention and monitoring. That is the court intervention itself seems to be quite powerful, and that if any psychological treatment is successful, the treatment must beat the court intervention and monitoring. Thus, one approach to the problem of reducing partner aggression would be to analyze the components of the interventions that appear to be successful in facilitating a reduction in partner aggression. However, since court interventions are generally not compared to no interventions, while it is assumed that they are effective, it is unclear whether legal interventions themselves are effective and that they would surpass the reductions in physical aggression that might have occurred with no intervention. No intervention may be seen as unethical because of the risk of repeated partner aggression, and thus an alternative approach would be to focus on interventions for partner aggression at low levels of aggression and where there is little or no fear of the partner, and where the aggression is reciprocal (O'Leary & Vega, 2005).

15.4 Mechanisms of Change in Interventions for Partner Aggression

In order to have clear evidence of mechanisms of change in an intervention program, having evidence of moderators and mediators of treatment would be extremely helpful. However, there are very few such studies. The partner abuse field is relatively new and there are basically no treatment studies that would allow one to have treatment outcome results which would satisfy the APA criteria for a validated treatment. More specifically, there are very few studies that have used a no treatment control (O'Leary & Vega, 2005). In addition, unfortunately, there has been little conceptual variability in the theoretical approaches that have guided treatment, and such lack of variability in intervention approaches contributes in part to the absence of cross-fertilization of approaches to evaluate intervention foci that would contribute to therapeutic outcome.

15.4.1 Prevention of Drop Outs

While research on mechanisms of change has been sparse, there are data that bear directly on treatment outcome such as the data on prevention of drop out from treatment. Given the drop out from treatment can be as high as 50% or greater, any methods of reducing drop out presumably would be of value in reducing partner aggression, especially if there is some evidence that interventions are successful.

In an outcome study comparing dyadic- and spouse-specific approaches to reducing partner aggression, Brown and O'Leary (2000) showed that there was an association between session one observer ratings of the working alliance and reductions in both physical and psychological abuse in a self-referred sample of couples in therapy for male-perpetrated violence. This study was the first to look at alliance as an outcome predictor in interventions for partner abuse, but additional data from a court-mandated sample would help buttress the importance of alliance in the more commonly used court-mandated programs.

As Taft, Murphy, King, Musser, and DeDeyn (2003) noted, process factors in psychotherapy typically account for a larger proportion of variance in outcome than the specific treatment approaches. Moreover, varied treatments may produce similar effects due to factors common to almost all forms of therapy. As of 2003, unfortunately, no study had examined treatment process variables among a predominantly court-mandated sample of partner-violent men. Taft et al. showed that therapist working alliance ratings predicted lower levels of physical and psychological abuse at the 6-month follow-up and were the strongest predictors of outcome. They also found that greater group cohesion during treatment, assessed by client report, also predicted lower physical and psychological abuse at follow-up. These results are in accord with other areas of treatment outcome and they may not be surprising to some. However, these results are quite important in that they point to the utility of using the general psychotherapy literature to help build effective treatments for partner abuse. The results also challenge the use of confrontational approaches in interventions for partner abuse.

15.5   Basic Competencies of the Clinician

This section is intended for those mental health professionals who come into contact with cases of partner abuse, but whose primary focus and experience is not necessarily focused on partner-abuse issues.

15.5.1 Ethics of Reporting Partner Aggression

Ongoing debates about whether partner abuse should be reported in the same ways as child abuse continue. Proponents of mandatory reporting laws for partner abuse suggest that such laws would enable early identification of victims, encourage continuity of care, and help secure access to recourses (Freed & Drake, 1999). Those against such policies prioritize the need for victims to feel in control and empowered to make their own decisions. This argument has gained support from the studies that demonstrate that women are often at heightened risk for abuse after they report the abuse and/or try to leave the home (e.g., Waltermaurer, McNutt, & Mattingly, 2006).

Researchers have asked women and physicians whether they would support a mandatory reporting system. For example, Malecha, Lemmey, McFarlane, et al. (2000) determined that 81% of a sample of 161 abused women supported some sort of mandatory reporting system (2000). However, other researchers found that though 73% of women thought a mandatory reporting system would make it easier for women to get help, 52% of them also feared an increase in abuse was likely with such a reporting system (Gielan, O' Campo & Campbell, 2000).

15.5.2 Assessment of Aggression and Abuse

Research suggests that mental health professionals are not necessarily any more diligent in screening for, and addressing, IPV than other health professionals (e.g., Dimidjian, Berns, & Jacobson, 1999). Gondolf (1992) found that out of 92 patients visiting an emergency department, 55% had been to the emergency department previously for an injury associated with family violence. Though in 70% of these cases, the assessing clinician did ask IPV-related questions about the newest injury, the clinician described the IPV as a primary problem in their report to the supervising psychiatrist in only 37% of cases. In another study of marital and family therapists, only 22% of professionals correctly identified abuse as the primary problem of sample case studies depicting severe abuse (Hansen, Harway, & Cervantes, 1991).

There are several imperatives to proper assessment of domestic abuse. First, proper assessment for domestic violence must be done individually, apart from their partner. There are several methods of assessment, namely interview and self-report. It is advised to begin the discussion with general questions about how the couple handles conflict and how conflicts generally end. Normalizing conflict by explaining that all couples experience conflict and handle that in different ways can help the client feel more comfortable in disclosing their particular situation. Once these discussions have taken place, it is very important for the provider to ask concrete, behaviorally specific terms to probe for abuse because some individuals will not endorse more global constructs of abuse (O'Leary, 2008). Additional areas to explore in an interview include tactics of control used in the relationship, level of fear of the partner and safety planning, and witnessing or involvement of children in domestic violence incidents. If severe abuse is disclosed by a client, it is appropriate and necessary to assess for risk of homicide. The Danger Assessment Instrument is such an instrument that has been designed to assess for this risk and should be used in cases where there is concern about more severe types of abuse and/or homicide (Campbell, 1995).

15.5.3 How to Develop a Safety Plan

There are two situations that should alert the mental health professional of the need to develop a safety plan. The first such situation is if it becomes apparent that the aggression or abuse has been escalating over time. The second situation is if the client reports that they fear their partner. Fear of partner has been shown to be an extremely reliable predictor of future aggression (Weisz et al., 2000), so this signal must not be overlooked.

The professional should begin by asking the client (usually a woman who has fear for her safety) what options she would have in the event she needed to get away from her partner whether she is at home or at work. Identifying the social supports the client could call on like

family members, friends, coworkers, or shelter resources is usually the first step. Transportation to a safe place and a brainstorming of the kinds of things she would need to have ready and accessible must be discussed. Important documents like her/his children's birth certificates, passport, marriage license, and bank books should all be put in a special place that only she knows about and can access quickly. Other things she should have packed are clothes, money, medications, phone numbers/addresses of her social supports, and children's belongings. Explaining that keeping a charged cell phone, if the person has one and can afford one, is also important. If the client has a restraining order or order of protection, she should give copies to her workplace security team and/or boss Children suspecting anything so as not to invite any questioning. Research has demonstrated that a woman is at a heightened risk of homicide in situations where she is separating from an abusive partner after having lived with him, after she has left the home she shared with the abusive partner, or after she has asked the abusive partner to leave the home (Campbell et al., 2003).

15.5.4 Knowledge of Local Shelter and Intervention Services

In order to adequately address issues of prevention of, and intervention for, IPV, it is imper-l ative that mental health professionals and local advocacy and support agencies join forces. Though local shelters and intervention agencies ultimately have the same goal for a battered victim as does the mental health professional, differing ideologies and principles at many times perpetuate the separation and lack of dialogue. Oftentimes shelter and advocacy staff operate under a system-change type of focus, whereas mental health professionals focus most of their attention on the client, from an individual perspective (Warshaw & Maroney, 2002). It is the responsibility of all professionals working with domestic violence clients to bridge connections with each other and become knowledgeable about the full range of services available to their clients.

15.5.5 When to Treat Substance Abuse Problems

A wealth of literature describes the clear association between domestic violence and substance abuse for both male and female perpetrators (e.g. Fals-Stewart, 2003; Cunradi et al., 1999). Kaufman, Kantor, and Straus report that just prior to the most recent and severe act of abuse for a national sample, 20% of men and 10% of women were drinking (1990). It has also been demonstrated that in a sample of partnered individuals seeking alcohol or drug treatment, the proportion of these dyads reporting at least one episode of IPV was four to six times higher than is true for the general population (Fals-Stewart, Golden, & Schumacher, 2003). In fact, Fals-Stewart demonstrated that on days in which the men in the treatment program drank alcohol, the odds were eight times higher that there would be a reported instance of male-to-female aggression as compared to days with no alcohol consumption. Though most research to date has focused on perpetrator's use of substances, particularly alcohol, evidence suggests the victim's use of alcohol is also related to their own victimization (Kaufman Kantor & Straus, 1990).

Several research studies have demonstrated that addressing substance abuse problems aids in decreasing or eliminating IPV for both male and female perpetrators (O'Farrell, Fals-Stewart,

Murphy, & Murphy, 2003). Since results demonstrate that IPV does decrease after standard alcoholism treatment, it is logical to surmise that clients with substance abuse problems should be given treatment for those problems, at least as part of the overall IPV intervention plan. Since these positive reductions in IPV only seem to hold in cases of alcohol or substance abstinence and given the high relapse rates following alcohol and substance abuse treatment programs, substance abuse intervention programs cannot serve as the standalone intervention for IPV (Fals-Stewart & Klostermann, 2009).

Unfortunately, combined substance abuse and IPV treatment approaches are relatively rare in research settings and community treatment programs. The few that have been described, however, have had positive results. The most empirically supported approach at this point is Behavior Couples Therapy (BCT), which is an alcohol and substance abuse intervention that utilizes partner involvement through safety skill training and does include a focus on conflict in the relationship. Two very promising individual treatment approaches that address both substance abuse and IPV include Dade County's Integrated Domestic Violence Model (Goldkamp, Weiland, Collins, & White, 1996) and Yale's Substance Abuse Treatment Unit's Substance Abuse-Domestic Violence (SATU-SADV) Program (Easton & Sinha, 2002). Though an intervention plan which addresses both substance abuse and IPV is the preferred type of intervention in many cases, careful assessments should be utilized which enable the assessor to determine the extent to which substance abuse is, in fact, contributing to IPV in that particular relationship.

15.5.6 When to Treat Relationship/Marital Problems

Many studies demonstrate that IPV is highly prevalent among couples presenting for marital therapy (Jose & O'Leary, 2009). Whether or not mental health professionals ought to provide couple therapy for partner aggression has been hotly debated. The literature contains varied testimonials that family and marital therapies for IPV are unethical, potentially dangerous for the victim, and generally inappropriate (e.g. Bograd & Mederos, 1999). Part of the reason for the unwillingness to support marital approaches comes from several assumptions. The first is that since conjoint therapies emphasize shared responsibility for behavior, the victim will be accused of sharing responsibility for their own victimization. The second assumption is that since conjoint therapy's foundation is built on open and honest communication, there is high probability that in being honest, the victim could put herself/himself in a more dangerous situation based on the conflict their honest responses may elicit from the abusive partner (Fals-Stewart & Klostermann, 2009).

There is a host of research, however, that offers a lens into this concern. Distinguishing between common couple aggression and abuse/battering is crucial in determining whether or not conjoint treatment is appropriate and safe (Jacobson & Gottman, 1998). Relationships in which there is either fear of partner or a history of injury and in which the violence is perpetrated out of an attempt to control and/or manipulate are classified as battering relationships. In these cases, marital therapy should not be used to treat the abuse (O'Leary, 2008). If this occurs, one should meet with both partners separately and in doing so help the victim become acquainted with community resources and go through the process of developing a safety plan with the client. The abusive partner should not know what was discussed with the victim, in an effort to protect the victim from further abuse after the session. The majority of couples presenting for marital therapy for aggression treatment will fall into the common couple violence

subtype and as such, be typified by mutual, low-level violence. Unlike the situation of battering in which conjoint treatment is inappropriate, research has demonstrated that in cases of common couple aggression, conjoint therapy focusing on mild to moderate types of aggression can be quite effective (O'Leary, 2008; Stith, Rosen, McCollum & Thomsen, 2004).

15.5.7 Different Treatments Needed for Partner Aggression and Abuse

There is no one-size-fits-all type of treatment for aggression, as the reasons for the aggression and the severity of the aggression can vary widely and are clinically meaningful. As discussed above, minor types of aggression that are not based on efforts to control and dominate, like common couple violence, can be successfully treated through marital therapy. More severe types of abuse on the other hand in which there is a history of injury and/or fear need to be treated with individual or group therapy for the perpetrator alone. In these cases, if the mental health professional is able to meet with the victimized partner, they should offer information about community resources and help the person develop a safety plan for themselves.

The severity of the abuse is also a determinant on the probable length of treatment that will be needed. Less severe aggression will be able to be treated in a shorter length of time than will more severe types of aggression. It is important to keep in mind that some very severe abuse may be too severe to be effectively treated with any of the treatments we currently have available. In these cases, communication and safety planning with the partner of the abuser is crucial.

15.5.8 Transition from Basic Competencies to Expert

In order for one to move from the basic to the expert competency level, it is important that the mental health professionals have a range and depth of experience in the field of partner abuse in order that they have a nuanced understanding of the issues involved, both for victims and perpetrators of partner abuse. Someone who has reached the expert level has had varied experience in seeing both male and female clients, under supervision, and if possible both heterosexual and homosexual cases in which partner abuse was the primary presenting problem. This person will have participated in conducting evaluations of partner-abuse interventions either in a group or as an individual. They will be abreast of the current empirical and theoretical work in the field through regular reading of the pertinent journals and chapters. An expert is someone who would be attending regular workshops or training sessions related to partner abuse and would be involved in some sort of partner-abuse prevention program. This person is also someone who is able to keep an open mind and always be thinking of new ways to treat or intervene with the problem of partner abuse.

15.6   Expert Competencies of the Clinician

15.6.1 Assessment of Individual Precipitating and Maintaining Factors

Since partner abusers are a heterogeneous group (e.g., Johnson, 1995), developing a set of IPV risk factors that are applicable to the diverse population has been, and continues to be,

a complex task. That said, there is a number of cognitive, affective/psychopathological, and relationship-behavioral precipitating and maintaining factors that seem to cut across subgroups of this population (Murphy & Eckhardt, 2005). Though there are a range of demonstrated precipitating factors associated with an increased risk of partner abuse IPV, (Schumacher, Feldbar-Kohn, Selp, & Heyman, 2001), this section will focus on those factors which can be intervened upon and which are proximal, in nature, to the partner abuse.

A common perspective within the cognitive literature is that abusive partners endorse attitudes, beliefs, and points of view that support and accept their abusive actions (Murphy & Eckhardt, 2005). Partner abusive men tend to blame the abuse on hostile intentions of their female partner (e.g., Byrne & Arias, 1997). Erroneous beliefs may also work to influence selective attention in relationship conflict situation, the emotional reaction to a situation, and the response to the situation (Murphy & Eckhardt).

Emotional disturbances and psychopathology also contribute to risk of IPV perpetration. The National Comorbidity Survey found that psychopathology in males, but not females, was predictive of IPV and the IPV was specifically predicted by the presence of the following disorders: premarital major depression, alcohol dependence, generalized anxiety disorder, and nonaffective psychosis. Severe acts of abuse were predicted by dysthymia, adult antisocial behavior, and nonaffective psychosis (Kessler, Molnar, Feurer, & Appelbaum, 2001). Other studies have corroborated the finding that presence of axis I disorder is related to abusive behavior (e.g. Danielson, Moffitt, & Caspi, 1998). Other variables such as anger/hostility, negative affectivity, low self-esteem, attachment insecurities, personality disorders including antisocial personality disorder substance use and abuse problems, and relationship distress have all been shown to be related to increased risk for IPV.

With regard to relationship-behavioral factors, research has demonstrated that relationship discord is a consistent correlate of IPV (Schumacher et al., 2001). Some posit that this link has to do with power and control dynamics. However, the vast complications with defining the construct of "control" have cast some doubt on the relationship (Malik & Lindahl, 1998). Negative communication and problematic interactional style of partners have also been found to be related to IPV (Jacobson et al., 1994). Finally, abusive partners have been found to have larger deficits in communication skills such as *spouse-specific* assertiveness (e.g., Rosenbaum & O'Leary, 1981) and appropriate expression of feelings (e.g. Eckhardt, Jamison, & Watts, 2002).

It seems that there are at least two different subgroups of abusive men that may be clinically relevant. One of these groups includes men who are solely aggressive within their family or intimate relationship. These men show signs of relationship discord but are otherwise reflective of the normal population in terms of psychological testing assessments. The second group has general problems with anger and/or aggression within and outside the family, impulse control deficits, and personality problems including antisocial and borderline tendencies as described above. This more disturbed cluster has more associated clinical problems such as substance abuse and childhood history of violence exposure (e.g., Waltz, Babcock, Jacobson, & Gottman, 2000) and perpetrate violence in a more frequent and severe pattern (Murphy & Eckardt, 2005).

Different grouping categories have been reported which may map onto these two subtypes or in some way refine our conceptualizations of IPV perpetrators. One of the distinctions has been between instrumental aggression, which occurs in the absence of sympathetic arousal and is goal-directed, and hostile aggression, which is believed to occur under conditions of

high emotional arousal (Bushman & Anderson, 2001). A second categorization system is that of reactive aggression, which is an impulsive response, and proactive aggression, which includes planning and calculated use of aggression (Dodge, 1991). Remington and Murphy (2001) found that antisocial personality-disordered abusive men were more likely than other abusive men to report engaging in preparation for the abuse and more likely to report positive emotions after inflicting abuse upon their partner (2001). This may mean that this group of men uses more proactive-instrumental aggression (Murphy & Eckardt, 2005).

The behavioral assessment process for partner abuse outlined by Rathus and Feindler (2004) prioritizes (1) observable behaviors (over inferred characteristics), (2) present and recent events (over historical or developmental factors), (3) environmental and situational determinants of behavior (over intra-psychic determinants), (4) ideographic, individual analysis (over nomothetic or normative analysis), (5) multiple sources of assessment data (over single-source information from the client), and (6) ongoing or continuous assessment (over one-time assessment). This assessment process should serve as the guideline for the mental health professional to use when assessing for partner abuse.

Early in the assessment process, it is important to assess the level of risk and dangerousness that the client poses to their partner. Since research has demonstrated that predictions of future violence are best done with empirically derived methods (Monahan et al., 2001) and we know clinical judgment underperforms in comparison to objective methods of prediction, it is important to use standardized, validated measures to assess. In order to assess risk of reassault on an IP, one can assess for risk of homicide with the Danger Assessment Instrument (Campbell, 1986, 1995); the risk of spousal violence with the Spousal Assault Risk Assessment Guide (SARA; Kropp, Hart, Webster, & Eaves, 1995), and the risk of violence recidivism for men with the Partner Assault Prognositc Scale (PAPS; Murphy, Morrel, Dlliott, & Neavins, 2003).

It is extremely important to be able to contact the partner of the abuser early in the assessment process. Reasons for the early risk assessment are to be able to offer resources and an opportunity to engage in safety planning with the victim, if the abusive partner is deemed to pose significant risk. In some cases, a partner will agree to be in touch with the mental health professional to lend insight into the abusive partner's behaviors which then can be used in the treatment process. Following an initial assessment of current risk to partner and, if necessary, contact of the partner, an in-depth clinical interview needs to be administered to the partner-abuser (Murphy & Eckhardt, 2005). This interview should begin with a process of gathering broad-based questions about relationship problems and conflict and specific, detailed information on one or two most serious incidents. Though some highly motivated clients will be able and willing to discuss the relevant details and will describe their role, others will need to be assessed over a few sessions during which rapport building and motivational interviewing will aid in their progress through the change process (Murphy & Eckhardt). It is important to let the client know that the assessment information will be used in order to help guide the treatment process and will be held confidential, unless they give their written permission otherwise. Other focal areas of the interview should: (1) assess the precipitating conflicts that prompt use of violence, (2) assess the process of conflict escalation, (3) uncover the cognitions involved during the initial and escalating phases of relationship conflict, (4) probe into the short-term consequences of the abusive behavior, (5) identify the dynamics of influence and control in the relationship, and finally, (6) investigate other clinical issues that may be associated including trauma history, personality traits, attachment problems, and psychopathology (for a template of an interview, see Murphy & Eckhardt). Standardized measures to assess for most of the key

correlates of IPV are available and should be incorporated into any clinical assessment of precipitating and maintaining factors (for a review see Murphy & Eckhardt).

15.6.2 Delivery of Treatment in Both Individual and Group Modalities

The vast majority of partner-abuse treatment programs is designed with group delivery in mind (e.g., Pence & Paymar, 1993). The group format has advantages such as less cost and potential for positive peer influence. However, there is a series of disadvantages. Research on delinquent adolescents has demonstrated that deviant tactics are often swapped among participants (Dishion, Spracklen, Andrews, & Patterson, 1996). In addition, a group format necessarily introduces a lack of flexibility for mental health professional leading the group (Murphy & Echardt, 2005). Many perpetrators of abuse have issues in their past such as sexual and/or physical-abuse histories, substance-abuse issues, and other psychopathology issues that are not able to be addressed in a group format. The sensitive nature of some issues make them inappropriate to discuss in a group setting and the heterogeneity of co-occurring issues and precipitating factors make addressing each person's unique issues related to their IPV impossible (Murphy & Echardt).

15.6.3 Reducing Attrition in Treatment: Developing Bonds of Trust

As with any type of therapeutic relationship, treating the partner-abusing client with respect and refraining from judging them is very important to foster trust and develop a strong alliance. Since the therapeutic alliance has shown to have a strong relationship to treatment outcomes (Horvath & Symonds, 1991), this is very important. There is growing evidence that a strong working alliance with partner abusers, in particular, does predict completion of treatment program and treatment outcome (e.g. Brown & O'Leary, 2000). This task is difficult for many mental health professionals, as many construe that providing warmth and empathetic listening means that one is complicit with the types of pain the abuser has in, or is, inflicting on others (Murphy & Echardt, 2005). However, clinical observations have demonstrated that the more a clinician truly understands the patient, the better the case conceptualization, the intervention planning, and ultimately, the more likely it is that the patient will ascribe to the therapy offered. Realizing that many partner abusers have had very difficult and painful histories, themselves, often helps in promoting empathy in the mental health professional. Learning as much about the client as possible can help the client feel understood and can inform case conceptualization and treatment approach, and can help the professional develop empathy for the hardship that the person has had to face in their own lives.

Drop out from treatment programs is an issue of interest for all mental health practitioners. Indeed, there is high attrition from partner-abuse treatment group programs on the level of 50–70%, despite many being court-mandated to participate (Daly & Pelowski, 2000). The situation for partner abusers is complicated because though many are motivated to attend treatment in order to avoid a jail sentence, often their motivation to change is low (Scott & King, 2007). In these cases, a strong working relationship with the mental health professional can help increase motivation for change. Musser et al. report that utilizing a motivational interviewing process in an individual format helps to increase compliance with group therapy and lead to a stronger alliance (2005).

15.6.4 Competency Conclusions

Competency can be thought of as a collection of three key parts: knowledge, skills, and values (Gebbie et al., 2007). In order for one to be competent, they must have threshold-level grasp over the key issues for each of these arenas. In order to have a basic competency in partner abuse, one must have clear understanding and knowledge of the ethical issues involved, the array of resources available to victims and perpetrators, the instances in which co-occurring issues need to be dealt with either prior to IPV treatment or simultaneously, the situations in which treating aggression and/or abuse is or is not indicated, and finally what types of treatments are effective for the different types of aggression and abuse. A professional with basic competency also must have the skills necessary to carry out a complete and informed assessment of the IPV including the motivations for the abuse, the severity of the abuse, whether or not the abuse has escalated, and the extent to which the victim is informed and prepared. The professional must also possess the skills to design a safety plan in collaboration with the victim, provide the appropriate treatment for the partner abuse and any co-occurring problems or else know of a competent referral source to provide to the client. Finally, in order to be competent at any level in the arena of partner violence, one must be able to approach all clients, victims and perpetrators alike, in a nonjudgmental way.

An expert level of competency in partner abuse necessarily includes a higher level of the same knowledge, skills, and values expected for basic competency requirements. An expert in the field of partner abuse must be able to assess for the factors that have coalesced to precipitate abusive behavior and the factors that are working to maintain that type of behavior. They must be knowledgeable and skillful in treatment delivery and aware of the conceptual basis for different types of treatment. The expert in partner abuse will also be someone who has developed advanced skills in therapeutic process and has learned how to find their empathy for a client, regardless of the behaviors that client has or is currently engaging in.

15.7   Summary

While partner violence research was almost unknown in the 1960s, the field of IPV has exploded in the past 3 decades. Research on correlates and risk factors have been a major focus of the majority of research, but interventions have been the subject of increasing attention. Fortunately, in addition, multivariate models of IPV have begun to be evaluated, and there is converging evidence from different research groups that violence in the family of origin, antisocial and/or aggressive behavior as a teen, anger, alcohol abuse, relationship dissatisfaction, psychological aggression, and power/control tactics have all been shown to predict partner violence. Batterer intervention has been the most common approach for dealing with partner violence issues, but the evidence supporting such interventions is weak. Thus, it seems appropriate to keep open minds to alternative conceptualizations for varied interventions such as marital therapy for aggression at lower levels and where there is no fear of partner. Further, given that IP aggression occurs in approximately 35% of young couples in a general population, prevention of partner violence before it exists at all and reduction and/or cessation of partner violence at lower levels seem especially important.

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16 Sexual Offenders

Robert A. Prentky · Adeena M. Gabriel · Anna I. Coward

Abstract: A small but growing niche of clinical practice involves services provided to sexual offenders, typically within the criminal justice system. This is an emotionally, and ethically, challenging area of practice that has, for all practical purposes, been unregulated, with the sole exception of the efforts of one professional organization (Association for Treatment of Sexual Abusers). Given the unusual demands placed on the clinicians working with sex offenders, and the high stakes nature of their work (providing effective treatment for clients disposed to committing sexual offenses, and offering evaluative judgments about the risk posed by these clients), it would seem reasonable to expect that this area of practice would be well regulated. As noted, this appears not to be the case. In this chapter we provide a framework for establishing guidelines for professional competence at two levels of practice – basic and expert. Our mission is not to provide an end product, but rather a blueprint to initiate dialogue and, in so doing, a process that will eventuate in a uniformly adopted standard for professional competence in this area.

16.1   Overview

The past several decades have witnessed an unprecedented number of state and federal laws intended to curb sexual violence. Federal legislation has included the Violence Against Women Act of 1994 (VAWA), the expanded VAWA legislation in 2000 (P. L.106–386, 18 U.S.C. 2261), The Wetterling Act, passed in 1994 as part of the Violent Crime Control and Law Enforcement Act (42 U.S.C. 14071), the amended Wetterling Act of 1996, known as "Megan's Law" (P. L. 104–145), the amended Federal Rules of Evidence in 1995 to include prior sex crimes, the Pam Lynchner Sexual Offender Tracking and Identification Act (42 U.S.C. 14072) in 1996, The Wetterling Improvements Act of 1997 (P.L. 105–119), the Victim's of Trafficking and Violence Prevention Act of 2000, and the Adam Walsh Child Protection and Safety Act of 2006 (P. L. No. 109–248, 42 U.S.C. 16901). The Adam Walsh Act established a comprehensive national system for the registration of all sex offenders (Title I, §301). The 2005 Florida law, referred to as "Jessica's Law," was introduced at the federal level during the 109th Congress. The federal bill (H.R. 1505), known as The Jessica Lunsford Act, mandates more stringent tracking of sex offenders. The most impactful legislation at the state level has taken the form of civil commitment laws targeting sex offenders.

This form of legislation first appeared in its current incarnation in 1990 in the State of Washington (WA Laws of 1990, chap. 3). Twenty states now have such laws (cf. Gookin, 2007). In addition, as of 1997, every state has had some variant of a sexual offender public notification law pursuant to the federal Wetterling Act of 1996.

All sex offenders, upon returning to society, are evaluated for risk by a state registry board and most end up in some form of outpatient treatment. All 20 states with civil commitment laws have prison-based treatment programs for those who are committed. In addition, many states provide prison-based treatment for noncivilly committed sex offenders (i.e., those

serving their criminal sentence). As noted above, most sex offenders returned to society are mandated or volunteer to enter treatment. Treatment for sex offenders, whether in prison or in the community, has evolved into a niche of clinical practice that employs a sizeable and growing number of practitioners. The largest professional organization, Association fo r Treatment of Sexual Abusers (ATSA), has 2,049 clinical members (as of 04/2009), and that number does not reflect the numerous therapists who treat sex offenders and do not belong to ATSA. Roughly 50–60% of those attending ATSA conferences each year, for instance, do not belong to the organization. Given the increasing demand for therapists to treat sex offenders, the emotionally – and ethically – challenging nature of the practice, and the unregulated nature of the "industry," it would seem prudent to establish, at minimum, guidelines for professional competence. It does not appear that this has ever been done, at least not in any formal sense. Our mission is not to provide an end product, but rather a blueprint to initiate dialogue and, in so doing, a process that will eventuate in a uniformly adopted standard for professional competency in this area.

16.1.1 Recognition of Symptoms and Their Assessment

Symptom recognition is complicated by the nature of the population being served. Sex offenders do *not* constitute a diagnostically or clinically homogeneous group possessing a discrete set of symptoms. If anything, "sex offender" is a legal term and refers to a person who has committed a sexual offense according to the legal standards of the jurisdiction in which the offense took place. This term is differentiated from "sexually deviant behavior," which does not necessarily imply illegal behavior and typically refers to a paraphilia.

Although some sex offenders can be diagnosed with a paraphilia called *pedophilia*, most sex offenders do not undergo any formal DSM-IV-TR (American Psychiatric Association [APA], 2000) diagnosis specific to being a sex offender. Simply stated, sex offenders are markedly heterogeneous with regard to their backgrounds, emotional problems, personality traits, treatment needs, and the nature of offenses they commit (Knight & Prentky, 1990; Knight, Rosenberg, & Schneider, 1985). As such, there is no discrete set of symptoms associated with being a sex offender. The best thing that we can do is to note what the clinical literature reports as being most frequently observed among child molesters and among rapists.

Although relatively little is known about the etiology of child molestation, there has been considerable speculation about the dimensions that are hypothesized to differentiate among different types of child molesters (Knight et al., 1985). Such dimensions include (a) sexual preference for children, (b) psychosocial and psychosexual immaturity; poor social skills, low social competence, poor self-esteem, and (c) impulsive, antisocial behavior. They define three core subtypes that appear to have clinical utility: (1) a child molester with an exclusive, long-standing sexual and social preference for preadolescents (i.e., a pedophile), (2) a child molester whose sexual offenses represent a "regression" or downward drift from an adult level of psychosocial adaptation in response to chronic stressors and perceived rejection (i.e., an incest offender), and (3) an exploitative, predatory child molester with a track record of impulsive, antisocial behavior and very poor social skills who turned to children because they were easy prey (Knight & Prentky, 1990; Knight et al., 1985; Prentky & Burgess, 2000).

In sum, etiologic factors gleaned from the empirical literature on child molesters include: (a) deviant sexual arousal to children, (b) other paraphilias (i.e., other deviant sexual interests), (c) developmental immaturity, poor social skills, and "stunted" relationships with adults, (d) antisocial behavior, and (e) the presence of highly intrusive sexual abuse, typically lasting for a protracted period and beginning at an early age. These factors do not, however, constitute *symptoms*. Psychiatric symptoms, usually in some combination, point towards the presence of a specific disorder or abnormality. There is no single disorder that captures all child molesters. As noted, the closest that we can come to is pedophilia, which is appropriate for a subset of child molesters.

Since the Diagnostic and Statistical Manual (DSM) was first published in 1952 (APA, 1952), there has always been a category for pedophilia. The current Manual (DSM-IV-TR) requires evidence of (1) recurrent, intense sexual behaviors, urges or fantasies involving sexual activity with a prepubescent child (generally age 13 or younger) for at least 6 months, (2) the individual has acted on these urges or is markedly distressed by them, (3) the individual is at least 16 years old and at least 5 years older than the victim, and (4) late adolescents who are involved in ongoing relationships with 12 or 13 year olds are excluded. Although there are multiple criteria noted above for diagnosing a pedophile, there essentially is only one symptom – recurrent, intense sexual behaviors, urges or fantasies involving sexual activity with a prepubescent child. All child molesters who have acted on their urges over a time period of 6 months or longer can be diagnosed as pedophiles. Hence, the DSM provides a single diagnostic category with a single symptom that can subsume most child molesters. Taxonomic models that differentiate among child molesters (e.g., Knight & Prentky, 1990), however, clearly reflect diversity of deficits, emotional and psychological problems, and motives.

Several investigators have developed and tested useful path models for explaining sexual aggression against women (e.g., Knight & Sims-Knight, 2003; Malamuth, 2003; Malamuth, Sackloskie, Koss, & Tanaka, 1991; Malamuth, Heavey, & Linz, 1993; Malamuth, Linz, Heavey, Barnes, & Acker, 1995). In Malamuth's earliest version of his confluence model (Malamuth et al., 1991), two major paths were identified, each with three factors. The first path consisted of (1) an abusive home environment, (2) delinquent behavior in adolescence, and (3) impersonal sexuality in adolescence and adulthood (e.g., early onset of sex, numerous brief partners, high frequency of sexual activity). The second path consisted of (1) cognitive distortions (irrational attitudes) that supported rape, (2) personality traits that included narcissism, entitlement, and hostility toward women, and (3) low empathy. A subsequent hierarchical-mediational version of the confluence model (Malamuth et al., 1995) added proneness to hostility (general anger) as a precursor of cognitive distortions on the second path. This additional hostility factor, along with low empathy and hostile masculinity (personality traits on the second path) are a theoretical match to Factor 1 of Hare's Psychopathy Checklist (PCL-R) (Harpur, Hakstian, & Hare, 1988), while impersonal sex on path one is a theoretical match to some of the items on Factor 2 of the PCL-R (Malamuth, 2003). Knight and Sims-Knight (2003) revised the Malamuth model, noting that the important dimension of hostile masculinity was not univocal. Knight and Sims-Knight (2003) tested a three path model on adult sex offenders and a sample of community controls (non-offenders). Path one begins with an abusive home environment, leads to callousness and lack of emotion (flat affect), which disinhibits sexual fantasy and sexual urges. Path two begins with sexual abuse, which disinhibits sexual fantasy and sexual urges. Path three begins with early onset antisocial behavior, which leads directly to sexual aggression.

The principal difference between these path models is the single dimension of hostile masculinity in the confluence model or a bifurcation into separate dimensions of antisocial behavior and callousness/unemotionality in the Knight model. This research, and the models issuing from it, has been pivotal in providing sound evidence for a unified, theoretical explanation of sexual aggression against women. Distilling the essence of this research, multiple major etiologic factors (dimensions) have been identified: (a) an abusive home environment, (b) a stable record of antisocial behavior, generally beginning in adolescence, (c) classic PCL-R Factor 1 traits, including narcissism, grandiosity, arrogance, and entitlement, callousness indifference to others, and lack of empathy, and (d) misogynistic attitudes. Unique to Malamuth's confluence model is the additional factor of impersonal sex, including promiscuity, high sexual drive, and numerous brief sexual encounters.

As with child molesters, these etiologic factors are not, in the conventional sense, psychiatric symptoms. Although rape is a specific behavioral (and criminal) outcome, it is not a specific psychiatric disorder. There has never been a category for "rape" in the DSM. As illustrated above, there are different paths that lead to an outcome of rape and each of those paths will comprise of a different set of *symptoms*. Although the extant literature described numerous dimensions associated with rape (cf. Prentky & Knight, 1991), it is reasonable, based on more recent literature, to reduce those dimensions to roughly five: (a) impulsive, antisocial behavior, (b) anger, (c) attitudes associated with hostile or negative masculinity, (d) traits common to Factor 1 on the PCL-R, such as lack of empathy, entitlement, narcissism, grandiosity, and callousness, and (e) impersonal and promiscuous sexual behavior.

16.1.2 Maintenance Factors of the Disorder

The basic mechanism underlying the continuation of sexual offending behavior is, at least theoretically, the offense cycle, described originally by Pithers, Marques, Gibat, and Marlatt in 1983. The basic process is as follows: life stressors lead offenders to experience intense affect that is distressing or disturbing. This negative affect is coupled with a sense of subjective deprivation, prompting the individual to seek relief or diversion from negative affect and noxious life experience. These individuals begin to make a series of superficially trivial decisions that undermine self-restraint, placing themselves in high-risk situations in which there is an increased likelihood of both unstable emotions and contact with potential victims, clearly a maladaptive response to aversive affect. By placing themselves in such situations, offenders lose their sense of self-control over refraining from offending (i.e., they have "lapsed"). This stage can include fantasies about offending, arousal to such fantasies, and distorted thinking that will allow acting on those fantasies. At this juncture, the short-term benefits of offending become more powerful than the long-term consequences, allowing offenders to slide from lapse into relapse: sexual contact with a victim. Post-relapse, offenders evaluate themselves, their victims, and the offense. Negative self-evaluation is common but temporary, giving way to cognitive distortions that rationalize the offense. Thoughts occurring during this stage provide justification for the offense that is essential to maintain offending behavior. In order to break the cycle of offending, it is crucial to intervene before a lapse develops into a relapse; doing so is the only way to prevent the justificatory thought processes that encourage future relapses. The offense cycle and its treatment will be described in more detail later in this chapter in the context of the relapse prevention treatment modality.

Another possible maintenance factor is mental illness. Anywhere from 15% to 24% of inmates in the USA have a severe mental illness (Teplin, Abram, & McClelland, 1996), and half of inmates have at least one mental health condition (James & Glaze, 2006). Inmates with major psychiatric disorders such as bipolar, schizophrenia, and nonschizophrenia psychotic disorders are more likely to have been previously incarcerated than those without psychiatric disorders (Baillargeon et al., 2009), suggesting that mental illness may play a role in recidivism. Although relatively few sex offenders are known to have major mental illness, a much larger proportion of sex offenders are thought to have some affective disorder necessitating antidepressant medication. As noted above, aversive affect is thought to underlie much sexually deviant and sexually criminal behavior. In the case of general dysphoria or clinical depression, sexual gratification may be a learned response that temporarily brings relief from depression. Clearly, this is not the case for all sex offenders, but it may well be a contributing factor in many cases. Substance abuse falls in the same category as a maintenance factor. Alcohol and drugs may serve the same purpose as sexual gratification – temporarily relieving the individual of chronic, noxious thoughts and feelings.

Lastly, the most obvious maintenance factor for some, by no means all, sex offenders is sexually deviant thoughts, fantasies, and urges. As a maintenance factor, sexual deviance is noted primarily among those child molesters who have an exclusive sexual preference for children and underage adolescents. Although sexual deviance may also be noted among child molesters with nonexclusive preferences (i.e., they have relationships with adults), there is a greater likelihood that other maintenance factors play a critical role as well. Sexual deviance may be observed among rapists as well (e.g., sadism), but it is rare.

16.1.3 Evidence-Based Treatment Approaches

Effectiveness of treatment can be measured by one question: does treatment reduce sexual reoffending, and if so, by how much? The management and treatment of sex offenders is often uninformed by research and is more often driven by personal feelings, moral convictions and political agendas. However, several meta-analyses have shown the treatment of sex offenders to be effective.

A 1995 study conducted by Hall brought together 12 studies of treated sexual offenders for a total of 1,313 men. Hall found a small but significant decrease in rates of reoffending as a result of treatment: sexual recidivism for non-treated offenders was 27%, while recidivism for treated offenders was 19%, an overall decrease of 8%. For studies that employed cognitive behavioral methods or anti-androgen medication, the decrease in recidivism was even larger. Hanson et al.'s Collaborative Outcome Data Project on the Effectiveness of Psychological Treatment for Sex Offenders (2002) examined 43 studies for a total of 9,454 offenders, approximately 54% of whom had received treatment. Across studies, sexual recidivism was about 12% for treated and 17% for untreated offenders. When examining only the most recent studies using the most current methods (e.g., CBT), they found sexual recidivism to be around 10% for treated and 17% for untreated offenders. The largest meta-analysis conducted to date, with 69 studies and 22,181 offenders, demonstrated a 6% reduction in sexual recidivism with treatment (Losel & Schmucker, 2005).

A 2000 study by Nicholaichuk, Gordon, Gu, and Wong compared 296 treated to 283 untreated offenders, finding the conviction rate for sexual reoffending to be 15% for treated

and 33% for untreated offenders. This sizable discrepancy may not be as encouraging as it appears on first glance; Nicholaichuk et al. (2000) acknowledge that this difference is likely due to the high rate of reoffending for the untreated offenders rather than a reduction in recidivism for untreated offenders. Zgoba and Simon (2005) investigated offenders from New Jersey's state prison for sexual offenders, which provides treatment to sexual offenders from the general prison population. Fourteen percent committed a new sexual offense within the 7-year follow-up period, with no statistically significant differences between treated and untreated offenders.

To date, only one randomized clinical trial has been conducted to investigate effects of treatment for sexual offenders: California's Sex Offender Treatment and Evaluation Project (SOTEP) (Marques, Day, Nelson, & West, 1993; Marques, Nelson, Alarcon, & Day, 2000). Volunteers were randomly assigned either to treatment or no-treatment conditions; guided by the possibility that willingness to participate might predict better treatment outcome, a randomly selected group of offenders who did not volunteer were also included as a control group. Participants who completed a course of treatment were found to have a higher rate of recidivism (22%) than did the volunteer control group (20%) or the non-volunteer control group (19%) (Marques, Wiederanders, Day, Nelson, & van Ommeren, 2005).

There is a clear discrepancy between results of the meta-analyses and those of the individual studies, the former indicating that treatment for sexual offenders is effective and the latter demonstrating that it is not. All three meta-analyses yielded similar results. However, due to the large sample sizes, minor differences in the rates of recidivism across the studies could reach statistical significance without achieving practical significance; Zgoba and Simon's (2005) considerably smaller sample, for example, was unable to achieve significance. According to Barbaree (1997), recidivism studies often do not pick up on the effects of treatment. Base rates for recidivism are fairly low to begin with (10–40%); when the sample size is also small, the treatment effect must be very large (e.g., 50%) to achieve significance between treated and untreated offenders. This sets the bar for significance very high and is a criterion that many researchers struggle to achieve.

Considering the difficulty in achieving significance, it may be tempting to rely on the findings of the meta-analyses and conclude that treatment works. Such a conclusion, however, ignores the findings of the most methodologically sound study conducted to date (SOTEP). How to interpret these findings has become a matter of controversy in itself (Marshall & Marshall, 2007, 2008; Seto et al., 2008), since it is risky to override what it widely regarded as the gold standard of research design. Due to the current lack of certainty regarding effectiveness of treatment for sexual offenders, treatment should be regarded as one potentially effective method for managing the risk of recidivism. It should neither be viewed as a panacea for offenders, nor be utilized in isolation. Rather, it should be included as an element of a rehabilitation plan that may include medication, probation, GPS monitoring, and other interventions.

16.1.4 Mechanisms of Change Underlying the Intervention

As we have pointed out in this chapter, the leading treatment utilized with sex offenders is Cognitive Behavioral Therapy (CBT). Through CBT, sex offenders achieve a sense of accountability for their behavior and an understanding of the impact of thinking on behavior.

By learning to identify problem thoughts (cognitive distortions), how to self-monitor these thoughts, and eventually replace these distorted thinking patterns with adaptive thinking, offenders undergo the changes necessary to reduce the risk of recidivism (Lipsey, Landenberger, & Wilson, 2007). Generally, CBT involves changing cognitions and thinking patterns, but specific skills such as anger management may be highlighted to initiate change. In their analysis of the effect of different cognitive behavioral programs on recidivism, Lipsey et al. (2007) found that cognitive behavioral therapy in general and not any CBT program specifically was responsible for change.

CBT with a sex offender population usually incorporates a Relapse Prevention model. Polaschek (2003) points out that Relapse Prevention is now part of nearly all sex offender treatment programs in the USA and is widely used in other countries as well. As discussed elsewhere is this chapter in greater detail, Relapse Prevention attempts to eliminate the possibility of a relapse by identifying triggers. By taking steps to deal with triggers in an adaptive way, the subsequent lapse or relapse can be avoided. Essentially, the process of identifying triggers for relapse and engaging in new behaviors following triggers interrupts the offense cycle. This is the mechanism of change that is sought in employing Relapse Prevention with sex offenders. In order for this to work and change to occur, the requirement at the outset of Relapse Prevention treatment is the desire to change. Offenders must be able to identify their behavior as problematic and be willing to make the changes necessary to stop engaging in the behavior. Without this first step it is understood that Relapse Prevention Treatment cannot take place.

In addition to the aforementioned methods through which change is achieved, Serran, Fernandez, Marshall, and Mann (2003) have pointed out the importance of the therapeutic alliance in effecting change in clients. Serran et al. (2003) highlight the importance of empathy, warmth, flexibility, support, and encouragement in effectively engaging clients in change through therapy. Additionally, the authors discuss the importance of boosting self-esteem when working with sex offenders. These elements should not be overlooked, as they are linked to the effectiveness of therapy through the client's willingness to participate in treatment, remain in treatment, and ultimately undergo change through the treatment process and the therapeutic relationship.

16.1.5 Basic Competencies of the Clinician

The APA (1992) defines competence as consisting of (a) education, training, and experience; (b) knowledge of scientific and professional information on services being rendered, including related fields of knowledge; (c) ongoing efforts to maintain competence; (d) efforts to protect the welfare of clients; and (e) the ability to recognize when effectiveness is compromised. The APA (1992) has outlined additional standards of competence for forensic psychologists, indicating that their activities should be based on suitable and sufficient data and that there should be a clear understanding of the limitations that constrain generalization in that field. It is important for psychologists training in all fields to understand that competence is not an endpoint, but rather an ongoing process of change and renewal that is measured by education, training, supervision, consultation, and other appropriate professional experiences (Nagy, 2005). Experience gained over time is essential for developing high-quality skills, as both experience and time are essential ingredients in developing sophisticated internal models

(Ericsson & Smith, 1991), as well as learning to link information and to distinguish between relevant and irrelevant information in problem solving (Patel & Groen, 1991).

Although more refined gradations in level of competence may be useful, for purposes of this chapter, we focus on a simple distinction between a "basic" level of competence that may be expected of most practitioners in the field and a more advanced level of competence that may be expected of "experts" in the field. Since we are focusing on the question of competencies for clinicians that assess, evaluate, and treat sexual offenders, we are always assuming some forensic context to the provision of services; hence, when we refer to clinicians, we are speaking about "forensic clinicians." In the broadest sense, basic competencies are those that a forensic clinician would require to develop and implement treatment plans, whereas expert competencies are more likely those that would be required to supervise and manage programs and to serve the courts. Each level encompasses three areas of competence: legal knowledge, assessment, and treatment. Basic legal knowledge is required to be able to work with offenders, and includes such topics as civil commitment, community notification, and registration laws, as well as the regulations governing the local sex offender registry board that oversees the clinician's clients. Expert legal knowledge requires a more extensive familiarity with legislation applying to sexual offenders. Basic assessment skills primarily focus on the task of developing an informed plan for provision of treatment services, including the assessment of individualized treatment goals. Assessment typically centers on the gathering of history at intake, both through self-report, psychological testing, and review of archival documents. The task of an expert that has been retained to evaluate an offender for a court proceeding may include a range of forensic assessments, such as competency, risk, civil commitment, malingering, and diminished capacity. Basic therapy skills consist of familiarity with the most commonly used treatments with sex offenders, an awareness of the role of medication in treatment, and an understanding of how and why medications are used to complement certain types of treatment. Expert therapy skills include a wider range of less frequently employed treatment interventions, more advanced knowledge of the use of medication, sophisticated supervisory skills, and an in depth knowledge of the treatment literature. We will now explore each of these areas of competence in detail, following a simple structure for this chapter: Three major areas of competence, each delineated for two levels of competence. We begin with basic competence, discuss each area, followed by expert competence, with a discussion of each area.

16.1.6 Education

Before embarking on an exploration of the legal, assessment and therapeutic knowledge a competent clinician must possess, we should address the question of what, if any, course of formal study provides a foundation for acquiring the skill to work with sex offenders. To begin with, there is *no* course of undergraduate study that trains one to work with sex offenders, other than basic education in core areas of psychology (e.g., abnormal psychology, developmental psychology, personality theory, and social psychology) and criminology (e.g., delinquency, violent crime, psychology of criminal behavior, and victimology). Some undergraduate majors in psychology include a concentration in forensic psychology. When a concentration in forensic psychology is absent, a minor in criminology is a good complement to psychology. Some institutions now offer graduate programs leading to a Master's degree in forensic psychology, with more targeted courses applicable to work with sex offenders, including electives on sex offenders or field placements working with that population. At present, the optimal course of formal

education for basic competence would be a Bachelor's Degree in Psychology or Criminal Justice, followed by a Master's degree in Forensic Psychology. A doctoral degree is required for expert competence. Since, with minor exceptions (e.g., John Jay College of the City University of New York), there are no doctoral-level degrees in Forensic Psychology, the conventional route is a Ph.D. or Psy.D. in clinical psychology, followed by postdoctoral forensic training.

In addition, and perhaps even more importantly, are the numerous opportunities for workshops and training offered by professional organizations, such as ATSA. These workshops provide focused training on sex offender-specific topics (e.g., the latest revisions to the RP model; new assessment techniques; techniques for working with special populations of sex offenders, such as females, juveniles, the developmentally disabled, and those with major mental illness; coping with burnout; new adaptations of covert sensitization or aversion therapy; the latest uses of anti-androgen and antidepressant medication; motivational interviewing; etc.). Since there is no formal educational program that prepares for work with sex offenders, such workshops, in conjunction with hands-on training, intensive supervision, and awareness of the literature, provide the primary education for this work.

16.1.7 Legal Knowledge

Clinicians working with sexual offenders must be aware of the legislation governing both incarceration and release conditions, specifically civil commitment, registration, and community notification. As noted, the country's first Sexually Violent Predator law was Washington's Community Protection Act of 1990. The Community Protection Act, providing for the civil commitment of sexual offenders, sought to protect the public by keeping the "most dangerous" offenders off the streets through indefinite incarceration. The decision to civilly commit is based on an assessment that an offender suffers from a "mental abnormality" that increases the likelihood that he will reoffend if released into the community (*Kansas* v. *Hendricks*, 1997). The US Supreme Court has given the states a great deal of flexibility in determining who is at risk of reoffending, and clinicians must be familiar with the prescribed procedures in their state.

Sex offender registration was introduced in 1994 with the passage of the Jacob Wetterling Act, a component of the Violent Crime Control and Law Enforcement Act (42 U.S.C. 14071), which required states to implement a sex offender registry wherein all offenders released into the community must provide the state with the location of their residence. In 1996, the Wetterling Act was amended by "Megan's Law," which required states to establish a community notification system making state registry information available to the public (P. L. 104–145). Megan's Law requires that every sex offender must be evaluated by the state's sex offender registry board (SORB) upon release from prison. Depending on the individual's level of risk for reoffending, as determined by the SORB, presumptive risk-mitigating procedures will be instituted, including notifying the public of the offender's identity and location. Since 1997, every state in the USA has adopted a public notification law.

In 2006, the Adam Walsh Child Protection and Safety Act (P. L. No. 109–248, 42 U.S.C. 16901) was passed, which organizes offenders into three tiers based on the severity of their offense histories. The Walsh Act mandates that Tier 3 offenders (the most serious) be subject to lifetime registration and update their whereabouts with the state registry board every 3 months. Tier 2 offenders are to remain registered for 25 years and update their whereabouts every

6 months, and Tier 1 offenders must remain registered for 15 years and update their whereabouts annually. Failure to register or to update is considered a felony. Clinicians must possess rudimentary knowledge about such management strategies and the known or anticipated impact of those strategies on their clients.

Basic competency includes general knowledge about how sex offenders are civilly committed, the elements that must be satisfied for commitment, acquaintance with the diagnostic issues related to the determination of *mental abnormality*, a rudimentary understanding of the legal concept of risk, the local laws governing registration and community notification, and the tier system used by the local sex offender registry board for classifying risk.

16.1.8 Assessment

As with any client, assessment of sex offenders should be preceded by a thorough review of all available documents and file records. Document review is followed by a comprehensive interview, the purpose of which is to corroborate or cross-check history, facilitate defensible diagnoses, and inform treatment plans, goals, and objectives. A comprehensive history includes such basic information as demographic, developmental, family, social, educational, work, and medical history, past and present substance use, psychiatric history, including treatment and inpatient hospitalization, psychological testing, and medication history. In addition, information must be gathered on psychosocial, psychosexual, cognitive development, history of trauma and maltreatment, history of conduct disordered, delinquent, and antisocial behavior, and lastly a complete history of all sexually deviant, coercive, and criminal behavior.

A mental status exam is typically included, covering the offender's appearance, attitude, behavior, speech, mood and affect, thought process and content, perception, cognition (including orientation, memory and concentration), insight and judgment. Both indirect means, such as observation, and direct means, including brief psychological tests (e.g., counting backwards by sevens from 100 or spelling the word "world" backwards), should be employed.

Supervision around the interview and treatment sessions is essential, as those who receive no supervision can be expected to make slower progress in developing population-specific clinical skills than trainees who receive feedback from seasoned supervisors (Lambert & Arnold, 1987). Arguably, ongoing supervision should be mandated for *all* clinicians treating sex offenders, regardless of how seasoned the clinicians are. The most "expert" clinicians can be fooled by the most wily, manipulative offenders. Supervision should address, among other things, boundary violations; cognitive distortions; minimization; superficial, flat, or inappropriate affect; feigned empathy; and factual distortions, as well as emotional impact on the clinician.

16.1.9 Treatment

Basic competence is generally the skill level required for providing conventional clinical and treatment services for sex offenders. Of all the basic services provided by clinicians, treatment is overwhelmingly the most common. Consequently, our major focus, when discussing basic competence, is on treatment.

16.1.10 Nonspecific Factors

When working with sexual offenders, clinicians should become familiar not only with treatment protocols to be utilized, but also with the nontreatment-specific factors associated with working with this population.

Emotional Preparedness and Burnout. Maslach (1976) defined burnout as therapists' loss of all concern and emotional feelings for the clients they work with, leading therapists to treat clients "in detached or even de-humanized ways." Therapists may become cynical towards their clients, blaming them for their own psychological distress and labeling them in derogatory terms (Farber & Heifetz, 1982). Burnout can result from a variety of experiences; according to a survey conducted by Farber and Heifetz (1982), 57.4% of therapists attributed their burnout to nonreciprocated attentiveness, giving, and responsibility demanded by the therapeutic relationship, and 73.7% cited "lack of success" as the single most stressful aspect of therapeutic work.

Clinicians working with sexual offenders, either in prisons or in the community, must be emotionally prepared for burnout. Working with sex offenders places greater than usual demands for self-protection from high-stress working conditions and high-voltage clinical issues. Clinicians vary in their sensitivity to stress, and certain job conditions may be more problematic for some than for others. Therefore, those aspiring to work with this population should carefully consider their own histories and motivations before entering the field (e.g., those with histories of personal and/or family victimization). Providing therapy for others as a vehicle for resolving one's own issues is likely to undermine treatment efficacy and possibly take a personal toll. Conducting therapy even under "normal" conditions can lead to burnout, but clinicians must consider the added personal and professional stress of working with this population, including uncooperative, unmotivated, and potentially malingering offenders; presenting behaviors that include violence toward children and women; and presenting childhood histories that may include severe trauma, as well as the added stress of working in a prison setting. Students considering this line of work should consult with those already in the field for first hand feedback about what to expect, keeping in mind that such feedback will be unique to the individual providing it and may not be a "good fit."

Awareness of, and Sensitivity to, Individual Differences. According to the APA's Multicultural Guidelines (2003), psychologists are encouraged to recognize that they may hold attitudes and beliefs that can negatively influence their perceptions of, and interactions with, clients who are different from themselves. Though this was intended as a reference to ethnic and racial prejudices, it can also be considered in the context of biases against sexual offenders due to the nature of their crimes.

Historically, cultural sensitivity training has been utilized to prepare clinicians for working with diverse populations, as it provides knowledge of politically correct terminology, mannerisms, and identifying characteristics of various groups (Back, 1973). However, this approach has not proven successful, as cultural generalizations are not always applicable to individuals (Myers, 2000). For example, referring to a Black client as African-American may not be politically correct (or sensitive), if the client does not identify as such. A human relations approach may be more useful. Instead of attempting to learn obscure facts about innumerable ethnic and cultural groups, psychologists should instead operate on the understanding that there are no rules about groups, that everyone is different, and that no one should be categorized culturally,

racially, or ethnically. Categorization may lead to generalizations that foster bias and judgment error (cf. Monahan, 1981). A human relations approach advocates a style of communication that can bridge cultural gaps. It is intended, moreover, to motivate the clinician to learn about each individual client, rather than the group in which they are believed to be a member (Myers, 2000). Social and cultural norms cannot be disregarded completely, however, as they can be useful in differentiating between normal and deviant behavior and in implementing appropriate interventions. What is out of the ordinary in one culture may be acceptable in another, and the application of one's own norms to an individual of differing background is equivalent to a failure to assess for individual differences. The result can be a false assumption of pathology or a failure to recognize pathology.

Despite an awareness of individual differences and the ways in which one might endeavor to be sensitive to them, it can still be difficult for clinicians to see past the heinous nature of the crimes committed by some sexual offenders and to make neutral and dispassionate assessments of people whose behavior they find reprehensible. We should acknowledge, however, the natural process of self-selection. Clinicians with a low tolerance threshold for sexually aggressive behavior are unlikely to be attracted to working with sex offenders. Having said that, there are many clinicians who, from time to time, are caught off guard and find that their objectivity is taxed by an offender's behavior. In the therapeutic realm, one solution lies in the treatment alliance. A strong alliance can control, contain, and place in perspective one's negative attitudes and adverse emotional reactions to the offender's behavior. A great deal of research has demonstrated a significant positive relationship between therapeutic alliance and outcome (e.g., Horvath & Symonds, 1991; Martin, Garske, & Davis, 2000). Yalom (1980) asserted that it is the therapeutic relationship itself that generates healing and makes a collaborative working relationship with clients essential. This is particularly true of clients who may be viewed as lacking motivation for participating in treatment, such as men who have sexually offended (Serran et al., 2003).

Cultivating an alliance with offenders can go a long way towards improving the quality of the treatment. Offenders need to feel accepted by their therapist, regardless of their previous behavior. Therapists working with sexual offenders will maximize their influence and increase the chances that the offenders will overcome their criminal propensities if they display empathy and warmth in a context where they provide encouragement and some degree of directiveness (Marshall, 2005). Such techniques, in conjunction with being rewarding, speaking the right amount and in an appropriate tone of voice, and asking open-ended questions have been shown to correlate with an increase in offenders' coping skills, while being confrontational correlates with a decrease in coping skills (Marshall et al., 2003a). Being respectful of offenders is also important, as it reflects acceptance and valuing of the offender and leads to more positive outcomes (Rabavilas, Boulougouris, & Perissaki, 1979; Strupp, 1980). Respect is demonstrated through an acceptance of personal strengths and interests, and is especially important when working with offenders, whose behavior is frequently the object of public condemnation. Therapists should make it clear to offenders that they distinguish between the individual and the crime, that disapproval is directed towards the offending behavior rather than the enactor of such behavior. As a rule, feeling bad about oneself leads to shame, which stifles change, whereas feeling bad about one's behavior leads to guilt, which facilitates change (Tangney & Dearing, 2002). When utilized properly, these techniques can have a positive effect, leading to the positive changes observed in sexual offenders as a result of treatment (Marshall et al., 2003b).

Forensic Ethics. Not every clinician working with sex offenders will be doing so in a prison setting; much of the work is conducted in the community. Regardless of where the work is conducted, clinicians must become familiar with their ethical obligations, both as psychologists in general and as practitioners providing services to a forensic population in particular. The APA (2002) has stated that forensic practitioners have an ethical obligation to understand the laws and rules governing their roles. However, equally as important is an understanding of what is ethical and appropriate practice. Practitioners must make every effort to define their role at the outset of their involvement, as different roles suggest responsibility to different parties (Heltzel, 2007): a treating clinician may report directly to a supervisor who works for the prison or is in the employ of a vendor hired by the prison. By contrast, a forensic clinician assigned to evaluate an offender will report directly to the attorney that hired her/him or directly to the court. Failure to define roles may have serious implications and may result in a breach of confidentiality if a clinician reports or discloses to an improper authority. Furthermore, clinicians involved in ambiguous relationships with offenders run the risk of engaging in dual or even multiple relationships as the distinctions between roles blur. In the code of ethics, the APA (2002) explicitly warns against engaging in multiple relationships with clients due to the considerable potential for impairment of the clinician's objectivity, and hence effectiveness, as well as the possible exploitation of the client. Because sex offenders in prison are a "captive" audience, they may solicit seemingly small "special favors" (e.g., Can you call my lawyer for me? Can you mail this for me? Can you make a copy of this for me?). A bright line must be maintained between the appropriate duties and responsibilities of the clinician and the slippery slope that crosses that bright line into inappropriate and unethical acts. The offender may be asking for a letter to be mailed, for instance, to circumvent the normal prison surveillance of outgoing inmate mail, or the offender may be requesting a copy of a document that is not supposed to be copied.

The Committee on Ethical Guidelines for Forensic Psychologists (1991) has published additional standards of practice. Practitioners must: (a) be prepared to present to the court the knowledge, skills, experience, training, and education that qualify them as experts, as well as the boundaries to their competence; (b) possess a "fundamental and reasonable" level of knowledge and understanding of the legal standards that apply to them; (c) be aware of the civil rights due to offenders and act in a manner that in no way diminishes or threatens those rights; (d) recognize that their own values and beliefs may interfere with their ability to practice competently, and under such circumstances must decline to participate or must limit their assistance in a way that is consistent with professional obligations; and (e) when testifying, present all findings and conclusions in a fair manner, without engaging in distortion or misrepresentation, nor avoiding, denying, or subverting the presentation of any evidence that may be contrary to their position. Every effort must be made to remain current with changing legal and ethical standards.

16.1.11 The Treatment Protocol: Relapse Prevention

The core model for treating sexual offenders is cognitive behavioral therapy (CBT) with an emphasis on relapse prevention (RP). Developed by Beck (1997) in the 1960s, CBT is a goal-oriented psychotherapeutic approach that attempts to influence problematic and dysfunctional cognitions, behaviors and emotions. The objective is to identify and monitor thoughts, assumptions, beliefs, and behaviors that are related and often accompanied by debilitating negative

emotions and to ascertain those which are dysfunctional, inaccurate, or simply unhelpful. This is done in an effort to replace such damaging thoughts with more realistic and useful ones. CBT has been used to treat a wide variety of disorders, ranging from disruptive behaviors in childhood to depression, anxiety, phobias, pain management, smoking, substance dependence, and even positive symptoms associated with schizophrenia.

RP was developed by Marlatt in the early 1980s (Marlatt & Gordon, 1985) and was designed to strengthen self-control by providing alcohol-abusing clients with methods for identifying problematic situations and analyzing decisions that lead to relapse. Its goal is to develop strategies to avoid or cope more effectively with "risky" situations. During the 1980s, the potential utility of RP for sex offender treatment was explored by Marques and Pithers and a model developed that was an adaptation of RP (Laws, 1989; Pithers et al., 1983). In the context of alcohol abuse, RP was originally intended to be used during the maintenance phase of treatment, following a phase during which abstinence was first achieved. However, this progression was not applicable to the treatment of sex offenders, for whom the behavior in question has often ceased prior to entering treatment. In practice, RP is used as an organizing principle for sex offender treatment. Since the early 1990s, numerous articles, chapters and books have been written about the application of RP to sex offenders (cf. Laws, Hudson, & Ward, 2000) and almost every sex offender treatment program in North America has reported the use of RP in their treatment in some way (e.g., Freeman-Longo, Bird, Stevenson, & Fiske, 1994). RP has been adopted by treatment programs in many other countries as well, including Canada, England, Australia, and New Zealand (Hudson, Wales, & Ward, 1998).

RP proposes that a variety of factors influence whether or not an offender will commit an offense, and that the interaction of these factors affects the probability of relapse (Pithers, 1990). The basic pattern of relapse has been identified as follows (Pithers et al., 1983): the offender feels that the pleasant events in his life are outweighed by adverse life events, resulting in the experience of acute stress. This stress results in a subjective sense of deprivation (known as lifestyle imbalance) that leads the offender to desire indulgence. As a result, the offender makes a series of superficially trivial decisions that undermine self-restraint and lead to high-risk situations, which could be an emotional state (e.g., feeling sad) or an environmental situation (e.g., going to a park where children play). Finding oneself in the midst of a risky situation threatens the offender's sense of control over abstinence from offending. This results in a lapse, such as fantasizing about offending behavior or viewing pornography. At this point, the short-term benefits of offending become salient, allowing the offender to slide from lapse into relapse and to experience a series of negative attributions and affects due to the failure to refrain from engaging in offending behavior. Some sex offenders relapse in situations that would have been difficult to anticipate, but many set themselves up for relapse by consciously or unconsciously placing themselves in high-risk situations. The probability of relapse further increases when offenders selectively remember the positive aspects of the offense (e.g., sexual gratification) rather than the negative aspects (e.g., getting arrested) (Pithers, 1990).

RP begins by dispelling the myth that treatment will "cure" the offender and continues with an assessment of the offender's high-risk situations and coping skills. Pithers (1990) has outlined the assessment procedures to be used in RP. Prior to meeting with the offender, the therapist must analyze the offender's case records to learn about predisposing factors and to develop hypotheses to test during the interview. During the interview, the clinician investigates affective, cognitive, and behavioral patterns associated with offending, as well as the offender's pattern of sexual arousal; what the offender finds sexually stimulating may indicate something

about the pattern of abuse and choice of victim. To identify the determinants of sexual aggression, the clinician should assess why the offender's response to a stressful situation led to a sexual offense rather than any other type of response. Self-report measures may also be used to assess the offender's history and behavioral patterns. To assess coping skills, the clinician presents the offender with hypothetical situations and asks the offender to indicate which coping skills he would utilize and to rate how much difficulty he would have enacting such a response and avoiding a lapse. Problems are considered to exist when the offender does not provide a response, elaborates on the risky elements of a situation, provides a strategy that is unlikely to be successful, or responds only after a long pause. The offender is then asked to provide a fantasized account of a future relapse, which allows the clinician to determine where adaptive and maladaptive coping responses are being used.

The treatment phase of RP has been conceptualized differently by different researchers. Pithers (1990) organized the treatment into two distinct groups of procedures: those for avoiding lapses and those for preventing lapses from becoming relapses. To avoid lapses, Pithers recommended that the clinician first identify offense precursors: many events preceding relapse can be avoided, and clinicians must teach offenders to recognize such events. Clinicians assist offenders in identifying behaviors and attitudes that were not previously recognized as being tied to offending; self-monitoring techniques can be useful at this stage. Once the relapse process has been delineated, treatment begins to focus on identifying the specific precursors for that offender, which could be emotions, thoughts, behaviors, or some combination of the three. The clinician should provide strategies to minimize lapse and to cope more effectively with momentary falters in self-management, assisting the offenders in viewing lapses not as signs of failure but as opportunities to enhance self-management. When a lapse is reported, the offender and clinician analyze it together with an emphasis on the circumstances that preceded the lapse; this helps to reduce the likelihood of recurrence under similar circumstances in the future.

Once offense precursors have been established, the treatment begins to focus on specific strategies the offender can use to avoid future lapses. When external stimuli lead to lapses, offenders can be taught to enhance their self-control through the use of stimulus control procedures that remove such stimuli from the environment or avoid such circumstances altogether. Since it is unlikely that offenders will be able to avoid every situation that may lead to relapse, escape strategies can aid offenders in removing themselves from a dangerous situation should one arise unexpectedly. The clinician should emphasize that escape strategies must be employed as early as possible when the offender finds himself in a situation he is unequipped to handle, and that the most important aspect of this strategy is the speed with which it is executed. As escape is not always a viable option, learning to cope with urges is a necessary skill. Offenders should be taught to deal with positive outcome expectancies through a reminder that initial gratification is typically followed by delayed negative effect; for example, though an abusive encounter might have been sexually gratifying, it may also have resulted in incarceration. Urges may dictate behavior; giving in to an urge is an active decision, and offenders must take responsibility for it. Treatment should help them see that if they refrain from acting on an urge, urges will eventually weaken and pass with time. If offenders find themselves unable to cope with their urges, programmed coping responses can be used to manage difficult situations: using a standard problem-solving process, offenders can be taught to describe problematic situations in detail, brainstorm potential responses, evaluate the likely outcome of each response, and rate their own ability to execute each response. The most adaptive response is

then selected for practice. Lastly, skills building interventions can be used to remediate deficits in anger management, problem solving, stress tolerance, sexual knowledge, interpersonal empathy, and basic survival skills.

According to Pithers (1990), there are two major techniques used to prevent lapses: cognitive restructuring and contracting. The former is used to restructure the offenders' interpretation of lapses. Instead of viewing lapses as an irreparable failing, clinicians should teach them to view lapses as mistakes that provide an opportunity to learn and the possibility to develop new coping skills, which can increase self-control. As treatment progresses, offenders should come to view lapses as slips in self-management rather than unchanging negative personality characteristics and as a single event rather than a predictor of catastrophe, provided that the event is dealt with in an appropriate and timely fashion. Clinicians should encourage offenders to summarize this material on a reminder card that can be carried with them at all times: when a lapse occurs, the offender should review the card and be reminded that this is a temporary lack of judgment that need not culminate in relapse. A complementary approach to preventing relapse is the use of contracting, in which the therapist and offender agree upon and commit in writing the specific limits to which the offender may permit himself to lapse. The offender is an active participant in determining the "lapse limit," but it is the responsibility of the therapist to ensure that it is a reasonable limit from which the offender will be able to return without danger of relapse. In addition to specifying the limit to which lapses will be tolerated, the contract requires the offender to limit his exposure to stimuli that lead to offending and to view offending behavior as a choice that demands a penalty.

Polascheck (2003) has conceptualized RP with sex offenders somewhat differently, organizing the treatment in terms of the sequence of events that led to offending in the first place; since there are different motives for engaging in offending, there must also be varying methods for preventing relapse. In this model, offending behaviors are identified as being due either to approach or avoidance. According to Polascheck, it is unclear whether offenders with approach motives should even be accepted into RP programs: "RP's core treatment philosophy is that the client is at least minimally motivated to refrain from the target behavior. …As such, RP is ill-matched to individuals who *want* to engage in the prohibited behavior" (p. 365). However, clinicians working within the prison system are often not authorized to decide who will and will not receive treatment, and must be prepared to work with offenders whose offense history is approach-based. Therefore, Polascheck provided guidelines for working with such individuals.

Approach goals are divided into two patterns, each with their own set of procedures: approach-automatic and approach-explicit. The approach-automatic pattern is a rapidly unfolding offense process that lacks planning, and such offenders often report that their behavior was spontaneous or reflexive. When working with such individuals, the goal of treatment is to disabuse them of the notion that their offenses simply "happened" (Hudson & Ward, 2000) and to lead them to acknowledge that their behavior had identifiable antecedents in which they knowingly and willingly engaged. Since offenses tend to occur rapidly once the offender begins to make contact with the victim, the key skill for approach-automatic offenders to learn is self-monitoring, which should be used to enhance self-control before behavior can escalate into offending. Contrary to the approach-automatic pattern, in which offenses occur without prior planning, approach-explicit offenses occur because the offender wants them to occur and arranges them. Such offenders typically feel no remorse following an offense. When working with this group, the major treatment task is to alter core beliefs associated with sexually or generally exploitative worldviews and hostile beliefs (Hudson & Ward, 2000). Cognitive

restructuring techniques may be useful, but attempting to purge such offenders of their deeply entrenched, highly reinforced, offense-justifying distorted attitudes will likely prove daunting.

Avoidance goals are also divided into two categories: avoidant-passive and avoidant-active. Avoidant-passive offenses occur due to chronic under-regulation of moods and behavior coupled with a lack of awareness of one's own agency in the offense. Such offenders seem genuinely oblivious to their own internal states and as such do not believe themselves responsible for their external behavior. These offenders must be taught to challenge this sense of helplessness. A main goal of the treatment is actively to engage in self-monitoring, so that offenders can identify emotional and behavioral antecedents such that situations do not appear to have arisen from nowhere. In contrast, avoidant-active offenses occur when offenders actively take steps to reduce offending, but the steps are poorly chosen and have the opposite effect (e.g., drinking alcohol and masturbating in an attempt to reduce sexual fantasies [Ward & Hudson, 1998]). Traditional RP works well with this group, as offenders are generally aware of their own contributions to the problem. However, treatment efficacy will be based on whether offenders can accept that these exacerbating strategies have a detrimental effect.

No matter what the approach to RP, clinicians should always be realistic and candid with offenders about the likelihood of relapsing. If an offender believes that the treatment program will cure him, he is more likely to see a momentary lapse as an irreversible trend and to give up on therapy. However, if an offender sees a momentary loss of control as an opportunity to benefit from lessons learned from the lapse and to gain greater self-control when similar situations arise in the future, lapses can become an instrumental part of therapy.

We have discussed some of the basic tenets of the RP model as originally formulated by Marques and Pithers. In reality, there is a considerable clinical literature on treatment of sex offenders (e.g., Laws, 1995; Laws et al., 2000; Schwartz & Cellini, 1995, 1997), as well as theoretical developments (Ward & Hudson, 1996, 1998; Ward, Louden, Hudson, & Marshall, 1995; Ward, Hudson, & Keenan, 1998), and recent applications of old treatment modalities (e.g., Hanson, Bourgon, Helmus, & Hodgson, 2009). Many of these developments, although refreshing, remain untested and have minimal practical utility for most therapists. We recommend for clinicians practicing with basic competence a thorough understanding of the theory and the application of RP. With training and supervision, basic competence might also include other behavioral modalities commonly used with sex offenders (e.g., systematic desensitization and aversion) and psychoeducational modules commonly used with sex offenders (e.g., anger management and social skills training).

16.1.12 Medication

As mentioned previously, the CBT platform upon which RP is built has been shown effective in treating a variety of psychological disorders. In some cases, however, psychotherapy, augmented by medication, may yield an improved response. Although nonmedically trained clinicians will not, as a rule, be responsible for prescribing medication, the treating clinician, as the individual primarily involved in the offenders' care, may be the first to determine that medication may be helpful. With regard to basic competency, we would set the knowledge bar fairly low. We recommend that it is incumbent upon the clinician to be familiar with medications commonly used with sex offenders, principally the anti-androgens and the (SSRI) antidepressants, and to know all of the behavioral indicators or signs suggesting the need for these

medications. As the potential "first-line responder," the clinician must be vigilant to the need for medication and to know when to make a referral to a physician.

In sum, under the umbrella of basic competencies, clinicians should be aware of the classes and names of drugs commonly used with sex offenders as well as the emotional and behavioral signs and symptoms that reflect a possible need for those drugs. We will discuss medication in somewhat greater detail under expert competencies.

16.2   Expert Competencies of the Clinician

Expert clinical work with sex offenders requires knowledge of specific techniques and interventions beyond the basic competencies. A general overview of the areas of basic competence for this niche of practice was presented earlier in this chapter, and will now be readdressed with respect to expert competence. According to the APA ethics code, adopted in August of 2002, "When assuming forensic roles, psychologists are to become reasonably familiar with the judicial or administrative rules governing their roles." Clinicians must become familiar with the issues and problems that are specific to not only a forensic population in general, but to sexual offenders in particular. This section will discuss expert competencies for assessing and treating this population.

Legal Knowledge. The interface of the mental health system with the practices and procedures of the Sexually Violent Predator courtroom is fraught with problems that have been addressed extensively elsewhere (e.g., Janus & Prentky, 2003; Prentky, Janus, Barbaree, Schwartz, & Kafka, 2006). Experts practicing in this interstitial world are expected to have an in-depth understanding of the legal requirements of the prevailing statute, case law, if any, related to the statute, and the aforementioned problems commonly encountered with these cases. Although experts do not interpret laws, they must understand the language and the putative intent of the laws to provide opinion testimony that will be useful to the court. In particular, experts must be conversant with the relevant case law and social science literature that address two key topics: (1) mental abnormality (the full array of diagnostic issues related to a statutory finding of mental abnormality), and (2) risk assessment. With regard to risk assessment, the expert must be acquainted with (a) the literature addressing the comparative efficacy of clinical assessments of risk and mechanical (actuarial) assessments of risk, (b) the empirical literature supporting the variable strength of different risk factors in predicting reoffense, (c) the critical methodological concerns that compromise objectivity (and accuracy) in rendering opinions about risk (e.g., base rate estimates and illusory correlations between presumptive risk factors and reoffense), and (d) the admissibility issues related to mechanical risk assessment, including Daubert criteria and scale-specific issues (e.g., error rates), should they arise.

16.2.1 Assessment

Assessing sexual offenders presents unique challenges to the clinician. According to Clipson (2003), "all forensic assessments must address the possibility that the person being interviewed may minimize, deny, exaggerate, or feign a psychiatric disorder to obtain a desired outcome." Beyond the potential for malingering, which will be addressed later on in this section, Clipson points out that sex offenders may be reluctant to honestly discuss their offending behavior due

to the legal implications of doing so, as well as embarrassment (i.e., awareness that their behavior is not only legally but socially unacceptable). Consequently, a well-crafted interview is essential, the sophistication of which can be expected to improve over time with experience, training, and supervision. Although conducting an interview is clearly part of basic competence, a "basic" interview will most often be restricted to history gathering, mental status, and informing a treatment plan. An "expert" interview, by contrast, may delve into a range of much more difficult issues, including (a) criminal responsibility, (b) malingering, (c) assessing psychopathy, (d) assessing symptoms of ADD, PTSD, or affective disorders, (e) formulating and exploring evidence for hypotheses about etiology, (f) gathering evidence related to risk, and so forth.

Lanyon (2001) noted that forensic psychologists require a structure "that delineates the relevant issues and provides some basic knowledge about appropriate assessment procedures." He proposed a six-step structure for assessing sex offenders. The six questions that can serve to guide the clinician in their initial assessment are as follows: (a) What kind of a person is this – what are the person's general psychological characteristics? (b) What kind of an offender is this – what are the person's deviant sexual interests? (c) What is the risk of reoffense – how dangerous is the person? (d) What is the person's amenability to treatment? (e) To what extent is the person engaging in self-serving misrepresentation during the evaluation? (f) In regard to forensic contexts, how well does the person fit specific formal criteria, either legal or other, such as "sexually violent person" or "pedophile?" The following sections will cover steps a through e presented above.

16.2.2 The Interview

Steps (a) and (b) described above are applicable to the initial interview with a sex offender. The first step, according to Lanyon, involves the assessment of personality and the gathering of background information to aid in an understanding of the individual to be treated. A detailed and extensive clinical interview should be used not only to gather pertinent information, but to establish rapport and provide a preliminary assessment of clinically significant behaviors that may aid in potential future diagnosis. In performing a preliminary assessment of a sex offender or an individual characterized as sexually deviant, there are areas that should be explored with greater detail than may be required in most initial assessments. Information pertaining to the psychosexual development and adaptation of the individual is pertinent and will aid in providing a comprehensive understanding of the specific manifestation of symptoms or behaviors in the sexually deviant individual. In addition, gathering a thorough history of childhood maltreatment and sexual history is necessary, and frequently critical. Areas, specific to the presenting problem, will be explored beyond that required of a general interview. This information will not only clarify potential sexually related disorders, but will serve to inform appropriate treatment and identify target behaviors.

16.2.3 Assessment of Sexual Attitudes, Sexual Fantasies, and Sexual Preference

Within step (b) Lanyon points out, in accordance with the diagnosis of a DSM-IV-TR Paraphilia, the importance of assessing the range of sexually deviant behaviors, the strength of interest in

the behaviors, and the comparison with nonsexual interests. There are several assessment tools designed to aid in assessing sexually deviant behavior and acquaintance with these instruments is imperative. Clinicians should be aware that psychometric tests exist for specific ages (e.g., children, adolescents, and adults), types of offenses (e.g., rape, pedophilia), and types of sexually deviant behaviors. Due to the wide variety of assessment tools available, a complete and clear understanding of the individual should be determined through the initial interview and information gathering. A short, incomplete list of commonly used measures specific to assessment of sex offenders is presented below. Clinicians should be aware that assessment tools used with a general clinical population do not necessarily translate to use with sex offenders. Clinicians should therefore be cautious of the relevance and validity of using any measure within this specific forensic context. Although assessment can inform treatment and aid in diagnostic formulation, no measure is infallible and should be considered only part of the information gathering.

Although the following is not intended to be exhaustive, or even comprehensive, we will list a number of commonly used measures that experts should be familiar with. Familiarity includes not only acquaintance with the relevant literature but a working knowledge sufficient to supervise the use, scoring, and interpretation of the procedure.

Cognitive Distortions. Offenders frequently use cognitive distortions (irrational attitudes) to justify, minimize, and occasionally deny their behavior. Consequently, cognitive restructuring is a commonly used treatment modality, and the assessment of cognitive distortions is occasionally included in a clinical assessment battery. Two well-known measures are the *Abel, Becker & Kaplan Cognitions Scales* (specific to sexual behavior with children, this assessment measures distorted ideas and attitudes about sex) and the *Bumby Cognitive Distortion Scales* (includes the Molest Scale and the Rape Scale, used with adolescents and adults). Although the use of any one of these scales may be infrequent, expert competence clearly includes facility with them.

Sexual Fantasies and Behaviors. There are a variety of self-report measures that are well-known and commonly used to assess sexual and paraphilic fantasies and behaviors, including the (a) Clarke Sex History Questionnaire (Langevin, Handy, Paitich, & Russon, 1985), currently published by Multi-Health Systems, (b) the Multiphasic Sex Inventory, published by the authors, Nichols and Molinder, (c) the Sexual Experiences Scale (Koss & Gidycz, 1985), and (d) Attraction to Sexual Aggression Scale (Malamuth, 1989a, 1989b). A resource guide for practitioners provides a much more complete list (Prentky & Edmunds, 1997). As noted above, although the use of any one of these scales may be infrequent, expert competence clearly includes facility with them.

16.2.3.1 Sexual Preference

Penile Plethysmograph (PPG)

The penile plethysmograph is a medical device used to measure male sexual preference by quantifying erectile responses to auditory and visual stimuli depicting normative and deviant sexual themes. There are two methods: circumferential and volumetric. Circumferential, the method commonly used in the USA, measures changes in the circumference of the penis using a transducer, either a mercury strain gauge or an electromechanical gauge. Generally, PPG assessments are done only in clinical settings and only for clinical purposes (e.g., to monitor changes as a function of treatment). There seems to be general agreement, moreover, that the PPG should not be used for forensic purposes (McConaghy, 1989; Murphy & Barbaree, 1994). Travis, Cullin, and

Melella (1988) went as far as to suggest that, "the only purpose that erectile measurements have in a forensic setting would be as one evaluative element contributing to an expert opinion offered to the court regarding potential treatment" (p. 248). Expert competence does not include ownership and routine use of the PPG. Expert competence does include, however, working knowledge of PPG, methodological issues, answers to frequently asked questions that may come up in court (cf., Lalumiere and Harris, 1998), and admissibility case law related to the PPG.

Abel Assessment for Sexual Interest-2 (AASI-2)

Abel developed a method for assessing sexual interest that is noninvasive (involves no measurement of erection), requires no stimuli depicting nudity, and always yields some response (i.e., there are no "flat liners" or "nonresponders" as are occasionally seen with the PPG) (Abel, Lawry, Karlstrom, Osborn, & Gillespie, 1994). The ASSI is a computerized assessment of self-reported sexual interest in images of children, teenagers, and adults. Because this visual reaction time procedure is easily transported and administered, noninvasive, and less expensive than the PPG, it has gained a considerable following and is widely used, especially when assessing sex offenders known to be, or suspected of being, pedophiles. As with the PPG, it is not assumed that an expert will own the ASSI. It is assumed, however, that expert competence includes working knowledge of the test and admissibility case law surrounding the test.

16.2.4 Assessment of Risk

Perhaps the single most challenging and demanding area of sex offender assessment is the assessment of risk. As stated in step (c), assessment of risk is an area common to sex offender evaluation. Expert competence requires practitioners working with sex offenders to be well acquainted with the myriad issues – legal, theoretical, empirical – that arise with risk assessment (cf. Janus & Prentky, 2003; Prentky et al., 2006). Although risk assessments may be called upon for a variety of reasons, including preparedness for community-based treatment, tier classification by the registration board, and other discretionary and management decisions, the most frequent use of risk assessment is in the adjudication of offenders petitioned for civil commitment as "sexual predators." Experts must be conversant with the different methods for assessing risk and the empirical literature that compares those methods (cf. Janus & Prentky, 2003). Experts must be conversant with the commonly used actuarial risk assessment scales, including the Violence Risk Appraisal Guide (VRAG), the Sex Offender Risk Appraisal Guide (SORAG), the Rapid Risk Assessment for Sexual Offense Recidivism (RRASOR), the Static-99, Static-2002, and the Minnesota Sex Offender Screening Tool-Revised (MnSOST-R) (Janus & Prentky, 2003; Seto, 2005), the rationale for using a particular scale, and the literature addressing the validity of that scale. Experts must be familiar with the empirical literature on risk predictors and relative effect sizes of each. Experts must strive to "avoid parochialism by embracing models and methods that are used by more 'mature' disciplines, far more seasoned in the ways of assessing risk" (Prentky, 2003, p. 22). Experts must be aware of the different types of risk predictors (e.g., static, dynamic, protective, etc.) and how each functions in an assessment. Experts must be conversant with, and make use of, the growing literature on acute and stable dynamic risk predictors. Experts must be cognizant of important potential risk mitigators, such as age, as well as risk aggravators, such as unruly institutional behavior. Experts must be aware of the impact of base rate estimates on their assessments. Overall,

experts must, "in the scientific vernacular, strive to reduce uncertainty" by paying acute attention to the sources and nature of uncertainty in risk assessment with sexual offenders (Prentky, 2003, p. 22).

Psychopathy Checklist-Revised (PCL-R)

The current procedure for assessing psychopathy is the well-known semi-structured interview (PCL-R) developed by Hare almost 30 years ago (Hare, 1980). Extensive research over the past decade has examined the factor structure, reliability, and validity of the scale. Use of the PCL-R is a complex undertaking, requiring formal training, or, at the least, informed supervision. We do not assume that those possessing expert competence with sex offenders will include being trained to use the PCL-R, in part, because assessing psychopathy is a relatively unusual demand when working with sex offenders. If the PCL-R is called for, however, the expert must acquire adequate training or turn the psychopathy assessment over to someone that is properly trained.

16.2.4.1 Assessment of Deception

Evaluating misrepresentation in called for in step (e). When discussing deception, clinicians commonly focus on malingering. According to the American Psychiatric Association (2000), malingering is the intentional production or exaggeration of symptoms for secondary gain. We feel it is necessary to point out that while deception within any clinical population includes the possibility of malingering, deception is far more complex and includes a variety of forms of deception and dissimulation. Additionally, manifestation of deception within a general clinical population differs from that of a forensic population, such as sex offenders.

Rogers (1997) has delineated the basic types of dissimulation that may occur and of which clinicians should be aware. When performing psychological assessment, an individual's response style can be indicative of the type of dissimulation in which they are engaging.By understanding the different response styles a respondent may employ, a clinician will be provided with clues as to the respondent's level of motivation to tell the truth or to deceive, as well as the sophistication of their attempt at dissimulation. Rogers has broken down response styles into six types: (a) *Malingering*, the intentional falsification or overreporting of symptoms; (b) *Defensiveness*, the minimization of symptoms; (c) *Irrelevant responding*, disengaging from the assessment in an attempt to produce results that do not provide an accurate picture of the respondent; (d) *Random responding*, failure to attend to the task in order to provide meaningless results; (e) *Honest responding*, which leaves it to the clinician to determine the reason behind inaccuracies in the results; and (f) *Hybrid responding*, any combination of the above response styles.

Dissimulation is common among sex offenders and can occur for various reasons. Sewell and Salekin (1997) explore deception among sex offenders. The authors cite a 1992 study by Kennedy and Grubin that described four patterns of denial based on a study of 102 male sex offenders. Pattern 1, consisting of 18% of the sample, was comprised of offenders who admitted their offense but denied any harm to their victims. They typically offended against young boys and claimed to have helped rather than hurt their victims. Pattern 2, consisting of 20% of the sample, was characterized by externalizing responsibility. They typically offended against young girls and were likely to blame their victim or another person for their behavior. Pattern 3, consisting of 35% of the sample, completely denied their offense. The offenders in this group

typically offended against adult females and were characterized by a lack of insight into the benefits of psychological treatment. Pattern 4, consisting of 27% of the sample, exhibited a dissociative style and attributed their behavior to "a temporary aberration of behavior or altered mental state." This group included heterosexual incest perpetrators.

It is clear that deception among sex offenders is more complex than a mere understanding of the concept of malingering. Not only can deception take place for a variety of reasons, but it can take many forms. Clinicians should be aware of the ways in which offenders deceive and why they do so. Detection of deception is indispensable to producing a valid diagnostic and clinical understanding of the individual. Beyond a solid definitional and theoretical understanding of the manifestations of deception, clinicians should become familiar with the assessments of deception. The most well-known method for assessing malingering and deception is Rogers' Structured interview of Reported Symptoms (SIRS). In addition, the Minnesota Multiphasic Personality Inventory-2 (MMPI-2) is occasionally administered and validity scales for detecting deceptive responding reported. The Multiphasic Sexual Inventory-II (MSI-II), which is occasionally paired with the MMPI-2 when assessing sex offenders, also includes scales that assess deceptive responding.

16.2.5 Treatment

Elsewhere we have discussed efficacy of treatment with sex offenders. Treatment efficacy with sexual offenders is measured by whether or not it reduces the targeted behavior. Lanyon indicated in his steps that amenability for treatment should be considered. We argue that this is in fact a moot point, as often treatment is required of sex offenders whether incarcerated or in the community. At present, there is no definitive way of determining an individual's amenability to treatment, however, the individual's motivation to participate in treatment seems to play a key role in whether or not treatment will be effective for a particular individual. In forensic settings, treatment is largely forced upon offenders, it is understandable that those who voluntarily participate in treatment and seek out therapy are more likely to benefit from treatment.

For the expert clinician, treatment extends beyond relapse prevention. Though that is the primary modality used with sexual offenders, it is often insufficient to meet their needs or to address additional pathology that may be contributing to or perpetuating their offense cycles. Therefore, it is imperative that the expert clinician become familiar with, and proficient in, a variety of treatment approaches that may be useful in working with this population.

16.2.6 Beyond Relapse Prevention

Beyond relapse prevention, many other treatment interventions have been adopted from other areas of clinical practice that have utility for target problems observed among some sex offenders. For example, if depression is a significant factor in an offender's offense cycle, it must be addressed, and the most effective interventions may be medication or medication combined with CBT. If trauma is a significant factor in an offender's offense cycle, trauma therapy or EMDR might be called for as a compliment to RP. In this section, we discuss treatment interventions commonly used in sex offender treatment programs that clinicians must be acquainted with. It is important to note that, with the noteworthy exception of medication and some

modes of behavior therapy (covert sensitization and aversion), there is a dearth of research investigating the efficacy of these treatments for sexual offenders. It is incumbent on sex offender treatment providers to know what interventions have been empirically validated with sex offenders and which have not. Empirical support for procedures and interventions developed for other client populations cannot be taken as empirical support for the application of those procedures to sex offenders. As with our discussion of RP, this section is not intended to instruct novice clinicians in the provision of the treatments detailed therein, but rather to familiarize clinicians with the treatments most commonly used with this population.

Posttraumatic Stress Disorder (PTSD). Four types of therapy are commonly used in treating posttraumatic stress disorder (Resick, Monson, & Rizvi, 2008): (a) Coping- or skills-focused treatment. The most commonly used coping/skills-based treatment is stress inoculation, which imparts coping skills in an effort to provide clients with a sense of mastery over fear. This is achieved through deriving an explanatory framework through which clients can understand the origin and nature of their fear and anxiety, thereby making sense of their trauma and its aftermath. Clients are also taught skills for dealing with physical, behavioral, and cognitive reactions, including relaxation and breathing control, covert modeling, role-playing, and guided self-dialogue. (b) Exposure techniques. Exposure involves reexperiencing the traumatic event in some way; techniques typically include imagining oneself in fear-producing situations, recalling traumas for extended periods of time, and confronting feared situations in vivo. A hierarchy of feared and avoided stimuli is generated, and clients are instructed to confront the feared cues daily for a prespecified amount of time, beginning with the least anxiety-provoking items on the hierarchy and eventually working up to the more distressing items. The therapist guides clients in reliving their trauma in the imagination, asking them to describe it aloud. As therapy progresses, clients are asked to describe the trauma in increasingly more detail, including thoughts, physiological responses, and feared consequences, with the goal of achieving habituation. (c) Cognitive therapy. Daily diaries and monitoring forms are often used to elicit dysfunctional and disturbing thoughts the client has experienced during the week. Therapy focuses on the meanings the traumatic event has for the client, and how those meanings confirm or contradict previously held beliefs about self and others. The therapist guides clients in discovering how they may have distorted the event in an effort to maintain prior beliefs about self and others, or how they may have changed their beliefs too much to cope with their trauma. Clients are taught to identify and dispute unrealistic thoughts about themselves, the world, and their futures through reasoning and evidence-based arguments. (d) Combination treatments. Such treatments typically combine exposure and cognitive elements, but may also include relaxation or coping elements.

Cognitive, exposure, and combined treatments have been found equally effective and more effective than relaxation exercises (Marks, Lovell, Noshirvani, Livanou, & Thrasher, 1998). Furthermore, prolonged exposure and prolonged exposure plus cognitive therapy have been found to work equally well (Foa et al., 2005), suggesting that exposure is the active ingredient in the treatment for PTSD. Whatever approach is selected, the therapist should be aware that clients with PTSD can be ambivalent about therapy and therefore somewhat difficult to work with; therapists should therefore expect some avoidance in the context of treatment (Resick et al., 2008).

Phobias. When treating phobias, the main goal is to decrease fear and phobic avoidance to a level that no longer causes distress or impairment. Both CBT and medication have been found effective in doing so, and both appear to work equally well when treating social phobia (First & Tasman, 2004). Exposure-based treatments have been shown to be useful in treating a

range of specific phobias (e.g., Foa, Blau, Prout, & Latimer, 1977; Muris, Mayer, & Merckelbach, 1998), and they work best when sessions are spaced close together, exposure is prolonged, and avoidance is discouraged; in addition, real life exposure is more effective than imaginal, and exposure is more effective when the therapist is involved than when a client is alone (Antony & Barlow, 1998, 2002).

As social phobia can be a factor in sexual offending, we focus on the treatment of that particular disorder. There are four main types of treatment for social phobia, and there is often overlap among these treatments (First & Tasman, 2004). In exposure-based treatment, clients list anxiety-provoking situations in a ranked hierarchy. The therapist then assists clients in repeatedly approaching feared situations, working from least to most anxiety-provoking, until the situations no longer elicit fear. Repeated exposure demonstrates to clients that feared consequences do not emerge despite having confronted the situation. In cognitive treatment, the therapist helps clients to identify and change their anxious thoughts by considering other ways of interpreting situations and by examining the evidence for their anxious beliefs. Social skills training is used to help clients become more socially competent in their interactions with others. The training includes modeling, behavioral reversal, corrective feedback, and social reinforcement. Lastly, applied relaxation is used to teach clients to relax their muscles during rest, during movement, and eventually in anxiety-provoking social situations (Ost, Lindahl, Sterner, & Jerremalm, 1984).

Inappropriate (Deviant) arousal. Sexual offending may be motivated by sexual arousal to inappropriate stimuli, inappropriate object choices (i.e., children), or inappropriate situations. Therefore, a primary therapeutic goal is to decrease deviant or inappropriate sexual arousal. The two principle behavioral modalities are olfactory aversion and covert sensitization. Covert sensitization has been used to treat sexual disturbance (Barlow, Leitenberg, & Agras, 1969; Callahan & Leitenberg, 1973; Segal & Sims, 1972) as well as a variety of other problems, such as alcoholism (Ashem & Donner, 1968; Cautela, 1970) and obesity (Cautela, 1967). The treatment is based on classical conditioning: deviant arousal is paired with an unpleasant stimulus, causing the deviant arousal to become aversive and therefore avoided. Nausea and vomiting have been used as aversive stimuli, and verbal descriptions of repulsive scenes in conjunction with imagined sexual behavior have been reported successful in controlling deviant sexual behavior in controlled studies and have been identified as the effective therapeutic ingredient in covert sensitization (Barlow et al., 1969). In covert sensitization, clients are asked to imagine a situation that would lead to arousal; however, it is important to note that they are not asked to imagine engaging in intercourse or anything else that might lead to a culmination of the arousal. Immediately after the imagined arousal, the aversive stimulus is introduced. When the aversive stimulus is removed, feelings of relief are emphasized; during this period of relief, offenders are asked to imagine a normative sexual experience (Levin, Barry, Gambaro, Wolfinsohn, & Smith, 1977), with the goal that offenders will develop an association between normative sexual experience and relief. This method has been shown to be effective for sex offenders as part of a behavioral modification program (Marshall, Jones, Ward, Johnston, & Barbaree, 1991).

16.2.7 Old Interventions Newly Applied to Sex Offenders

It is incumbent on all clinicians providing treatment for sex offenders to be aware of new developments, and one interesting new development is the application of the Risk-Need-Responsivity

(R-N-R) model developed by Andrews and Bonta (Andrews & Bonta, 1998; Bonta & Andrews, 2007) for general offenders to sex offenders (Hanson et al., 2009). Hanson et al. reported that programs that adhered to R-N-R evidenced the largest reductions in both sexual and general recidivism. Program effectiveness increased as the total number of R-N-R principles adhered to increased. The R-N-R model proposes that the most intense treatment services be reserved for those at greatest risk (the Risk part), that treatment programs target those "criminogenic needs" with empirical support (the Need part), and that programs use only techniques with demonstrated responsivity (i.e., techniques that sex offenders are known to respond to) (the Responsivity part). It may be empirically defensible to argue that modern RP-based treatment programs adhere to the Responsivity component. We would further argue, however, that, by and large, the Risk and the Needs components are neglected. This is a good example of a newly developing application of an old offender treatment model that all clinicians, irrespective of competence level, should be aware of.

16.2.8 Medication

Drugs have been used in the USA to reduce sexual drive for over 60 years. Female sex hormones (i.e., estrogen) were the most commonly used substances in the late 1940s and early 1950s and major tranquilizers were used in the 1960s. Until recently, the principal alternative to the major tranquilizers has been the anti-androgens. The anti-androgen drug of choice in the USA has been medroxyprogesterone acetate (Provera, Upjohn). Since reduction of sexual drive in sex offenders is not an indicated use for Provera, it is used in the USA only on an experimental basis with sexual offenders (i.e., "off-label").

The first systematic use of Provera for the treatment of sexual offenders was initiated in 1966 at Johns Hopkins University. The early research at Johns Hopkins during the 1960s and 1970s was conducted by Money (1970), and followed in the 1980s by Berlin (e.g., 1989). Research on another anti-androgen, cyproterone acetate, has been conducted by Bradford (e.g., 1998). In general, these anti-androgen drugs reduce overall sexual drive by reducing libido, sexual fantasies, nocturnal emissions, spontaneous erections and masturbation. To use the expression coined by Berlin, these drugs reduce "sexual appetite."

Berlin (1983) described another approach to reducing testosterone, the use of a gonadotropin releasing hormone agonist (GnRH). The drug that has been most often used in the USA with sex offenders is leuprolide (Lupron). The advantages of Lupron over the more commonly used anti-androgen (Provera) include fewer side effects and greater potency when it comes to decreasing testosterone. The major disadvantage is that Lupron, at least at the present time, is much more expensive than Provera.

A major addition to the anti-androgens for treating sexual offenders is the group of antidepressants classified as selective serotonin reuptake inhibitors (SSRIs). Reduced serotonin has been associated with a wide variety of psychiatric problems, including most impulse control disorders, suicide, major affective disorders, anxiety disorders, panic disorder, consummatory disorders (such as alcoholism), obsessive-compulsive disorder and aggressive behavior. The SSRIs increase serotonin, and the biological basis for the use of these drugs with sex offenders was provided in a series of papers by Kafka (e.g., 1995, 1997a, 1997b, 2003) and others during the 1990s.

In summary, drugs used to treat sex offenders fall into two categories: (1) the anti-androgens, such as Provera and Lupron, and (2) the SSRIs, such as Prozac, Zoloft, and Paxil.

These drugs are most helpful in treating sex offenders who are highly preoccupied with sexual thoughts and fantasies and those who report a high sexual drive or high total sexual outlet. In addition to their high sexual drive and often atypical or paraphilic expression of sexual urges, these individuals may also have low self-esteem, social anxiety, social skills deficits, low grade anxiety, and depressive symptoms. For these reasons, a combination of an SSRI with an anti-androgen may be most effective for those sex offenders that present with high sexual drive coupled with an affective disorder.

Expert competency must include a working knowledge of those drugs commonly used with sex offenders. Working knowledge includes awareness of (1) the principle on-label indications for these drugs, (2) side effects associated with these drugs, (3) the pharmacodynamic properties of these drugs, and (4) to a much lesser extent the pharmacokinetics of these drugs. Comorbid diagnoses may produce complex poly-pharmacy. Awareness of potential interactions between the anti-androgens and frequently observed medications used to treat other disorders (e.g., major affective disorders) is part of expert competency. In addition, familiarity with the recent literature on the efficacy of both the anti-androgens and the SSRI antidepressants is critical. There is a substantial empirical and theoretical literature on drug use with sex offenders. A rudimentary knowledge of this literature is essential. In addition, there are significant ethical issues that expert competency embraces. As noted above, for example, the principle anti-androgen used in the USA is prescribed off-label, requiring a detailed statement of informed consent. In addition, compulsory (mandated) use of drugs, occasionally referred to as "chemical castration," may raise possible Eighth Amendment issues. Acquaintance with these ethical issues is part of expert competence.

16.3 Transition from Basic Competence to Expert

Since most practitioners working with sex offenders have a Master Degree, transition from basic to expert competence typically begins with education – acquiring a doctoral degree. Beyond the acquisition of a doctoral degree and licensure, transition to expert competence requires hands-on work experience with parallel supervision, extensive reading, and attendance at professional workshops.

16.4 Summary

Establishing benchmarks for levels of competence in the relatively small niche of specialized practice with sex offenders is difficult given the apparent absence of prior efforts in this regard. We have attempted, nonetheless, to provide a preliminary set of recommendations, subject to the scrutiny and critical appraisal of our colleagues. This area of clinical practice is unique in at least two major respects. First, a substantial proportion of practitioners are Master's-level. Among ATSA's 2,049 clinical members, for instance, only 455 (22.2%) have doctoral degrees. Thus, over three quarters of ATSA's clinical members are MA-level practitioners. Thus, unlike most specialty areas of clinical practice wherein transition from basic to expert competence translates to training and supervision around new tasks or procedures, transition to expert competence for those providing basic clinical services to sex offenders usually means returning to school to acquire a doctoral degree. Second, since the "clients" are typically current or

former offenders, there is increased sensitivity to ethical issues, as well as occasional demand for services that are uniquely forensic, such as assessment of risk for recidivism and court testimony.

We hope our contribution prompts further discussion around appropriate guidelines for levels of competence for those working with sex offenders. Given the increasing number of clinicians entering this field, working with forensic clients under heightened conditions of ethical and legal scrutiny, it would seem prudent that this area of professional practice be legitimized with accepted standards of training and practice, delineated standards for competence, and some form of certification process that insures competent practice.

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Special Topics

17 Geropsychology

Michele J. Karel · Gregory A. Hinrichsen

Abstract: Geropsychology is a growing area of practice within professional psychology. Due to the demographic imperative of an aging population, increasing numbers of psychologists will find themselves working with older adults, their families, and related care systems. They will seek to develop increased competence for work with this historically underserved yet rewarding and challenging clinical population. This chapter reviews the knowledge base and skill competencies for professional geropsychology practice, as defined in the Pikes Peak Model for Training in Professional Geropsychology. Foundational competencies (e.g., ethical issues, diversity, relationships) and functional assessment, intervention, and consultation competencies are defined and elaborated as applied to an older adult population. The chapter includes an overview of common late life clinical problems (e.g., depression, anxiety, dementia, alcohol and substance abuse), strategies for evaluation and efficacy of psychological interventions (e.g., for depression, anxiety, caregiver distress, behavioral problems in dementia, sleep problems), and settings of care for geropsychology practice (e.g., primary, long-term, and end-of-life care). The importance of interdisciplinary care and consultation skills is emphasized. Basic versus expert competencies for geropsychology practice are delineated; basic competencies are important for any psychologist working with older adults while expert competencies are important for psychologists who will serve as geropsychology educators, supervisors, and leaders. Essential components of a geropsychology training program are reviewed, while emphasizing that there are multiple developmental pathways to geropsychology competence. Resources for further information and education in the field are provided.

17.1   Overview

Professional geropsychology is the application of psychological and gerontological knowledge and skills in the assessment of and intervention with older adults and their families. Services are provided within a range of health care, residential, and community settings. Geropsychology is a growing area of practice within professional psychology. Its growth is due to the expanding aging population and associated health care needs, growing research base that informs geropsychology practice, increased opportunities for geropsychology training, and Medicare reimbursement for psychologists (He, Sengupta, Velkoff, & DeBarros, 2005). However, there are many fewer psychologists with the interest, training, and experience to serve older adults when compared with the need for geriatric mental health services (Qualls, Segal, Norman, Niederehe, & Gallagher-Thompson, 2002). To meet the needs of an aging population, most psychologists will need to develop basic competence to serve older adults, along with an increased number of geropsychology experts to provide education, training, and leadership in this field.

17.1.1 Geriatric Health Workforce Shortages

Geriatric health workforce shortages are projected across multiple professions, including medicine, nursing, social work, psychiatry, and psychology (Center for Health Workforce Studies, 2005; Institute of Medicine, 2008). Geriatric mental health care workforce shortages are of particular concern (Halpain, Harris, McClure, & Jeste, 1999; Jeste et al., 1999). Factors associated with the increased need for geriatric mental health services include rapid growth of the "oldest-oldest" population (those over the age of 85 years), with associated complex mental health needs related to chronic illness, dementia, and long-term care; the aging of the baby boom cohort, which has higher rates of mental disorder than the current cohort of older adults (Koenig, George, & Schneider, 1994); and the greater receptivity to mental health services among cohorts now entering older age (Gatz & Smyer, 2001; Jeste et al.; Qualls et al., 2002). Furthermore, most health care professionals receive relatively little training in providing care to older adults, and few professionals choose to specialize in geriatric care. Medicare reimbursement policies often do not give financial incentive to professionals to provide care to older adults (Center for Health Workforce Studies, 2005).

A survey of American Psychological Association (APA) members in 1999 projected that psychologists were meeting only about half the need for geropsychology services at that time, with little preparation for future needs (Qualls et al., 2002). The survey found that, while most respondents (69%) reported spending some professional time with older clients, only 3% devoted most of their professional work to geropsychology. Most had received very little formal training in geropsychology. For those who did receive training, it was on-the-job training (49%) or informal (76%). More than half (58%) felt that they needed more training to work competently with older adults.

17.1.2 Growth of Professional Geropsychology

The good news is that professional geropsychology, while still a relatively small specialty area of practice, has come into its own over the past few decades. It now has a robust research base, multiple scientific journals, defined competencies for practice, a training model, education and training opportunities at all levels, active professional organizations, and organized policy advocacy efforts. In 1998, the American Psychological Association created the Office on Aging, which coordinates efforts to improve Psychology's ability to meet the needs of older adults. The Office on Aging webpage is a substantial channel for information and resources related to geropsychology practice (http://www.apa.org/pi/aging/).

Efforts to define competencies for geropsychology practice and models of training for the field have been ongoing for almost 3 decades. To date, three training conferences have been held. The "Older Boulder" conference, held in Boulder Colorado in 1981, focused on graduate education in geropsychology (Santos & VandenBos, 1982). The "Older Boulder II" conference, held in Washington, DC, in 1992, attempted to define the knowledge base for professional geropsychology practice and outlined three levels of geropsychology competence: exposure, experience, and expertise (Knight, Teri, Wohlford, & Santos, 1995). After much effort by a Task Force spawned at the 1992 conference, the APA adopted and published the *Guidelines for Psychological Practice with Older Adults* (American Psychological Association,

2004). Twenty guidelines addressed six broad domains: attitudes; general knowledge about adult development, aging, and older adults; clinical issues; assessment; intervention, consultation, and other service provision; and continuing education regarding practice with older adults.

In 2006, the National Conference on Training in Professional Geropsychology convened in Colorado Springs. It produced the Pikes Peak Model for Geropsychology Training (Knight, Karel, Hinrichsen, Qualls, & Duffy, 2009). The Pikes Peak Model delineates attitude, knowledge, and skill competencies; provides a general model of training for the field; and makes recommendations for training at graduate, internship, postdoctoral, and postlicensure levels (Karel, Knight, Duffy, Hinrichsen, & Zeiss, in press; Qualls, Scogin, Zweig, & Whitbourne, in press; Hinrichsen, Zeiss, Karel, & Molinari, in press).

17.1.3 Pikes Peak Competencies for Professional Geropsychology Practice

Efforts to delineate geropsychology attitude, knowledge, and skill competencies were informed by broader efforts within professional psychology (Kaslow et al., 2004). The "Cube Model" conceptual framework that emerged from the 2002 Competencies Conference embraced the development of both foundational and functional competencies across a psychologist's training career (Rodolfa et al., 2005). The Pikes Peak geropsychology competencies build upon these professional psychology competencies. They define the specific attitude, knowledge, and foundational and functional skill competencies recommended for working with older adults. The Pikes Peak functional competencies focus on assessment, intervention, and consultation skills (Knight et al., 2009; Karel et al., in press).

This chapter outlines the knowledge base for understanding adult development, aging, and clinical geropsychology; foundational geropsychology knowledge and skill competencies; functional geropsychology knowledge and skill competencies in the domains of assessment, intervention, and consultation; settings for geropsychology practice; and consideration of basic versus expert competencies in geropsychology.

17.2 Knowledge Base for Geropsychology

17.2.1 Knowledge of Adult Development, Aging, and the Older Adult Population

The background against which psychologists provide clinical services to older adults is the larger field of gerontology. Gerontologists have studied aging through the lens of the major academic disciplines, and have given us a sense of what is normative for many older adults. Some theorists have tried to place later adulthood within the frame of the entire life span (Erikson, 1980; Levinson, 1978). Adult development and aging researchers have focused on how central themes or issues help us to better understand aging (Bengtson & Schaie, 1999; Birren & Schaie, 2005). Psychologists have played an important role in developing methodologies to study aging over time and to identify changes that are due to age per se,

rather than others factors that may covary with age, such as unique generational experiences that shape attitudes and behavior (Schaie, 2005). Demographics are important in the study of aging and reveal how population dynamics and structure shape societies and individuals. The fact that in the year 2030, 20% of Americans will be 65 years of age and older has substantive implications for the United States (Federal Interagency Forum on Aging Related Statistics, 2008).

Physical change is part-and-parcel of growing older. There are normative changes in vision, hearing, physical strength, and appearance that are experienced by older adults (Whitbourne, 1999). Familiarity with these changes helps the clinician to identify what is usual (vs. a disease process), and to make adaptations to professional practice that optimize clinical interventions and rapport (e.g., environmental changes to maximize hearing and seeing). Psychologists have had a prominent role in studying aging, including the relationship of age with stability and change of information processing, emotional regulation, mental abilities, and personality (Birren & Schaie, 2006). The social dynamics of the aging process have long been a focus of gerontological research, including social roles, family and marital relationships, friendship formation and continuity, and engagement in voluntary organizations (Binstock & George, 2006). In contrast to the negative and stereotypical views of older people, most enjoy reasonably active and fulfilling relationships with family, friends, and community (APA Working Group on the Older Adult, 1998).

An understanding of what is normative for older adults as a whole must be tempered by an appreciation of the diversity within this age group. A gerontological maxim is that "the older people get, the more diverse they are." Factors such as social class, race/ethnicity, disability status, sexual orientation, and place of residence interact with the aging process in ways that create unique vulnerabilities and unique strengths. Although a black woman who spent most of her life in the rural south and a white man living in a large northern city may both be 80 years of age, life experience, economic status, personal perspective, and a myriad of other factors will likely vary greatly.

17.2.2 Knowledge Foundations of Clinical Practice with Older Adults

While the majority of older adults live without functionally disabling physical or mental disorders, a minority do suffer from them. Knowledge of common problems experienced by older adults is a critical reference point for practicing psychologists. Most older adults suffer from one or more chronic illnesses, and take one or more medications. Up to one-quarter of older people meet criteria for a mental disorder. Mental disorders and symptoms are more common among older adults who have physical health problems. Though rates of most mental disorders are lower in older adults when compared with younger adults, older people are at much greater risk of cognitive impairment or dementia than younger people. For example, about 5% of people of 65 years of age and older have dementia and the risk for dementia doubles every 5 years. Older people are less likely to seek mental health services than younger people for varied reasons (e.g., generational attitudes, lack of access to services, financial barriers). Among those who do seek services, the most common presenting problems are dementia, depression, anxiety, and adjustment disorders. Older adults often have multiple problems including co-morbid physical and mental disorders (Zarit & Zarit, 2006).

Some mental disorders have unique presentations in later life and require careful evaluations. As noted, older adults often take one or more medications which may be associated with the onset of or clinical complication of mental disorders. Physical and social environments interact with physical and mental health problems of later adulthood. Physical environments that promote physical functioning (e.g., few stairs, bathroom grab bars, transportation options) and easy access to age peers and family will likely have a salubrious effect on emotional health (Lawton & Nahemow, 1973). Most older adults with physical or mental health problems have a web of family and social relationships which may be critical resources. However, the process of providing care to older adults with physical, emotional, or cognitive problems can be very stressful for family members and may erode their ability to provide care (Schulz & Martire, 2004). Geropsychologists appreciate that a full understanding of an older adult requires a substantive assessment of family and social supports.

17.3   Foundational Competencies

Foundational competencies for geropsychology practice are built upon foundational competencies of the "Cube Model" (Rodolfa et al., 2005). Foundational competencies are the underlying "building blocks" informing all professional psychology activity, and include: self-reflective practice, scientific knowledge and methods, relationships, ethical and legal standards, individual and cultural diversity, and interdisciplinary systems. The Pikes Peak Model has added two additional foundational skills for geropsychology practice that cut across functional domains: advocacy and care coordination, and the business of geropsychology practice. Further, the Pikes Peak Model defines the knowledge base that informs these foundational geropsychology skills and all geropsychology practice (Karel et al., in press).

17.3.1 Ethical and Legal Standards

The APA Ethics Code guides the professional behavior of psychologists working with older adults. Beyond the core ethical guidelines for this profession, psychological practice with older adults can raise complex ethical and legal dilemmas. Distinctive ethical issues arise particularly in working with older adults who are physically or cognitively disabled, increasingly dependent on others for care, or cared for in interdisciplinary health care settings (Karel, 2008).

When caring for frail older adults, there is often a tension between promoting an individual's right to make *informed* decisions for himself or herself, consistent with his or her values and beliefs, and the professional desire to protect individuals who are no longer capable of making informed decisions (e.g., regarding health care, residence, money management, driving). Older adults have the right to confidentiality (even if the family brought them for treatment, or if treatment team members want to know their clinical status) and privacy for psychological care (even if they live in a nursing home with little private space). Hence, psychologists who work with older adults should be alert to decision making capacity of older people while working to optimize their participation in decision making. Familiarity with laws and institutional policies regarding confidentiality, surrogate decision-making, advance directives, conservatorship, guardianship, end-of-life care, and elder abuse is also important (Karel, 2007; Mezey et al., 2002; Moye, 1999; Moye et al., 2007; National Center on Elder Abuse, 2008; Qualls & Smyer, 2007).

17.3.2 Cultural and Individual Diversity

The experience of aging differs across gender, generational, socioeconomic, ethnic/racial, cultural, linguistic, religious, disability, sexual orientation, gender identity, and geographical (urban vs. rural) statuses. Age has been an under-appreciated aspect of individual diversity, but a person's age alone tells us very little about that person. It is essential to acknowledge interactions between age and other aspects of diversity. Psychologists who work with older adults should be aware of the wide diversity among older adults. They should work to counter stereotypes about aging in themselves, their clients, client's families, and communities, and work in a culturally sensitive manner with a wide range of older adult clients. Cultural, ethnic, religious, and other individual differences very much inform older adults' values, attitudes, and beliefs regarding aging, disability, caregiving, medical decision-making, dying, and grief. These factors will also have an impact on choices and preferences in the course of geriatric health care (Administration on Aging, 2001; Hinrichsen, 2006; Karel, 2007; Xakellis et al., 2004; Yeo, 2001; Yeo & Gallagher-Thompson, 2006).

17.3.3 Multi/Inter-Disciplinary Teams

Many older adults are healthy, hearty, and may seek psychological services to address a circumscribed life problem. With advancing age, however, many older adults are at risk for multiple medical, neurological, psychiatric, and psychosocial problems. Increasingly complicated problems benefit from assessment and treatment from a wide range of professionals. In many geriatric health care settings, an interdisciplinary team evaluates the older adult and then devises a treatment plan that includes interventions by multiple team members (e.g., physicians, nurses, social workers, rehabilitation and occupational therapists, pharmacists). Geropsychology practice, therefore, requires an appreciation of the contributions of other disciplines to geriatric care and effective communication with other professionals (Fulmer, Flaherty, & Hyer, 2003; Zeiss & Steffen, 1996).

17.3.4 Self-Reflection

Self-reflection is the awareness of one's own biases, assumptions, or sources of discomfort that may influence professional behavior. Each psychologist has different personal and professional experiences that influence attitudes and feelings about aging and older people. For example, were grandparents present in one's childhood and, if so, were they a positive or negative influence? Were older family members active and productive until later years, or did they suffer disabling medical, cognitive, or emotional conditions? Did psychology training include exposure to older adults and, if so, what were those experiences like?

Self-reflection also includes evaluation of one's own competence to address the care needs of a particular patient, or population. Metacompetence is one's ability to accurately evaluate what one does or does not know, and guides professional development (Falender & Shafranske, 2007). Psychologists new to clinical work with older people must evaluate whether or not they can offer competent assessment or intervention services, and seek consultation, continuing education, and referral to other professionals when needed.

17.3.5 Relationships

In geropsychological practice, relationship competency refers to the ability to establish effective and empathic working relationships with older clients. Barriers include negative stereotypes of, personal discomfort with, or exaggerated respect for or, conversely, infantalization of older adults. Effective clinical work will be difficult without the ability to relate to older adults with respect, genuineness, appreciation for long lives lived, recognition of strengths as well as deficits, and adapting communication with respect to an individual's sensory, cognitive, intellectual, and emotional capabilities (Knight, 2004; Scogin, 2000). The ability to foster empathic and collaborative relationships with families, treatment team members, and other colleagues is also critical. Further characteristics of relationship competence include recognition of strengths and shared goals of various stakeholders, and effective negotiation of conflict.

17.3.6 Application of Scientific Knowledge

Psychologists who are relatively new to working with older adults may not have been exposed to the large research literature in adult development and aging, geriatric mental health, and gerontology. This research broadly provides information on effective and ethical geropsychology assessment and intervention. Geropsychologists should familiarize themselves with the scientific basis of normal versus pathological aging (Birren & Schaie, 2006), psychological assessment methods with older adults (Lichtenberg, 1999), and the growing literature on evidence-based psychological interventions with older adults (Gatz, 2007; Scogin & Yon, 2006). Psychologists acknowledge the strengths and limitations of the scientific knowledge base (e.g., there remains relatively little research on psychological interventions for very old or ethnically diverse elders).

17.3.7 Business of Geropsychology

A core foundational competency for geropsychology practice is the understanding of Medicare and Medicaid. Medicare is the primary insurer for adults aged 65 years and older. The 1989 Omnibus Budget Reconciliation Act recognized psychologists as independent Medicare providers, thus, significantly increased the ability of psychologists to provide mental health care to older adults. Further, in 2002, Medicare expanded coverage for psychological services to include assessment and intervention for health conditions (not only psychiatric illness), through the "Health and Behavior Assessment and Intervention" codes. State-funded Medicaid programs often cover co-payment fees for poor patients. Some older adults have private insurance policies that cover co-payments (Hartman-Stein & Georgoulakis, 2007; Karlin & Duffy, 2004; Karlin & Humphreys, 2007).

Psychologists who wish to provide services to older adults must, in most cases, become Medicare providers and be informed about coverage and appropriate coding, billing, and documentation for services rendered. Services must meet the criteria for medical necessity, and each encounter must be so documented (Hartman-Stein & Georgoulakis, 2007). The Centers for Medicare and Medicaid Services (CMS) contracts with fiscal intermediaries (FI), regional

insurance companies that develop local coverage/reimbursement policies for services and process claims. Psychologists who serve older adults will become well acquainted with the policies of their regional FI. The CMS website is a key resource for geropsychologists (www.cms.gov). In addition, the APA website (www.apa.org) and, in particular, the APA Practice Organization website (www.apapractice.org) are useful resources. Medicare regulations often change, and hence, it is important for psychologists to remain updated. Further, psychologists can play a critical role in policy advocacy to ensure adequate mental health care for older adults (Karlin & Humphreys, 2007; See APA Office on Aging, at http://www.apa.org/pi/aging/).

17.3.8 Advocacy and Care Coordination

Older adults face many barriers to accessing health and mental health care, as well as community-based and long-term care services. Service networks can be complex and fragmented, eligibility criteria may be difficult to understand, and telephone or physical access may be problematic for people who have trouble seeing, hearing, walking, driving, or comprehending or communicating clearly. Geropsychologists work to minimize these barriers to care. They recognize the importance of care coordination, continuity of care, and advocacy for older adults. Further, they coordinate care with family members, medical and social service providers, community agencies, and others. Advocacy and care coordination occur with consent from the older adult or from the surrogate decision-maker of the older adult with impaired capacity.

17.4 Assessment Competencies

Competence for psychological assessment of older adults builds upon general adult assessment competencies. These competencies include understanding the importance of a biopsychosocial conceptual framework to inform assessment, appreciation of reliability and validity of assessment instruments for the population at hand, and appropriate use of assessment results to inform recommendations and treatment planning. Distinctive issues for geropsychological assessment are normal versus pathological aging, comorbidities in older adults, and the critical role of environment and social context for an older adult's functioning. Furthermore, a lifespan perspective on psychopathology informs assessment, as various disorders have different baserates, phenomenology, and risk factors in older adults. Psychological screening and assessment tools may or may not be reliable and valid for an older adult population. However, increasing numbers of tools are being developed for use with older adults (Lichtenberg, 1999; Zarit & Zarit, 2006).

17.4.1 Fundamental Considerations for Geropsychology Assessment

Older adults referred for psychological assessment often present with a range of symptoms that can have multiple possible etiologies. For example, consider a 76-year old woman who complains of trouble sleeping, poor motivation, increased worrying, trouble concentrating, and increased forgetfulness. These symptoms might be attributed solely or in combination to

depression, anxiety, dementia, chronic pain, recent medical hospitalization for cardiac problems, medication side effects, alcohol misuse, caregiving stress, or other factors. Therefore, the initial list of "rule-out" diagnoses can be quite long. Assessment also includes attention to client strengths as well as deficits, the implications of medical and psychological problems for everyday functioning, the environmental and social context that may serve to enhance or pose barriers to optimal functioning and quality of life, and how assessment results may be translated into practical recommendations for the older client, family, and/or professional caregivers.

The Pikes Peak assessment knowledge-base encompasses the understanding of normal aging and psychopathology in late life, methods often needed to inform assessment of an older adult, limitations of some assessment methods, and contextual issues that may affect assessment results. Interdisciplinary assessment is often indicated. For many presenting problems (e.g., undue fatigue, confusion, depression), medical, medication, nutritional, or other organic causes should be ruled out. Psychologists need to be attentive to age and educational normative data when assessing older adults, and be aware of the limitations of tools not specifically normed with older adults, particularly older adults from ethnic minority and immigrant backgrounds. Further, it is important to be aware of individual and environmental factors that may influence assessment performance (e.g., sensory problems, limited literacy, medical conditions, noisy hospital setting with distractions).

Pikes Peak geropsychology assessment skills include the abilities to: (1) Conduct clinical assessment and differential diagnosis (e.g., common problems include depression, anxiety, grief, delirium, dementia, medication and physical disorders, and their effects on functioning); (2) Use psychometrically sound screening instruments for cognition, psychopathology, and personality to inform treatment planning; (3) Refer for neuropsychological, neurological, psychiatric, medical, or other evaluations as indicated; (4) Use cognitive assessments and/or neuropsychological reports to clarify clinical issues and inform treatment planning; (5) Evaluate decision-making and functional capacities (e.g., for managing finances, independent living, driving, and making health care decisions); (6) Assess risk (e.g., suicidality, self-neglect, elder abuse); and (7) Communicate assessment results to various stakeholders with relevant, practical, and clearly understandable recommendations, in tandem with consideration of confidentiality issues (Knight et al., 2009).

Several of these competencies warrant further discussion. Given rising rates of dementia with advancing age, it is important to screen for cognitive problems. While the large majority of older adults are cognitively intact, it is important to screen for possible cognitive problems and, if needed, conduct or refer for further evaluation. Signs of cognitive problems during a clinical interview include: difficulty recounting details of recent history, vague responses to questions, repetitive responses or stories, tendency to defer to a family member if present, marked distractibility, extreme tangentiality, or obvious confusion or disorientation. Tools such as the Mini-Mental Status Exam, the Modified Mini Mental Status Exam, or the Clock Drawing test are cognitive screening tools and are not diagnostic in nature. However, they can help to structure a screening and suggest whether further cognitive evaluation is indicated (Attix & Welsh-Bohmer, 2006; Cullen, O'Neill, Evans, Coen, & Lawlor, 2007; Ruchinskas & Curyto, 2003).

Another important geropsychology assessment competency is evaluation of older adults' decision-making and functional capacities. The following questions often prompt psychological assessment referrals: "Is dad still safe to live on his own?"; "Should my wife still be

driving?"; "My elderly patient is refusing recommended surgery, is he 'competent' to refuse the intervention?"; "Mom is making huge donations to local charities, is she really able to make these financial decisions?" Many psychologists, including geropsychologists, have not been trained to evaluate decision-making and functional capacities. While psychiatric, cognitive, or neuropsychological assessment results suggest implications for functioning, there is often not a direct relationship between a person's score on a memory test and, for example, ability to live alone. Functional assessment includes gathering an array of data from multiple sources; assessing an older adult's abilities to understand, appreciate, reason, and make particular choices; using decision-making or functional capacity tools; collaborating with other professionals; and appreciating the ethical and legal context for findings of compromised capacities. Psychologists with little training in this area should be cautious in providing professional judgments about capacities, particularly when an older adult stands to lose certain freedoms or legal self-determination (American Bar Association & American Psychological Association Assessment of Capacity in Older Adults Project Working Group, 2008; Moye, 1999; Qualls & Smyer, 2007).

Finally, psychologists working with older adults must be aware of risk issues in this population. Suicide risk is relatively high among older white men, particularly those who are depressed and physically disabled (Heisel & Duberstein, 2005). The practitioner is aware of signs of self-care problems, and emergent medical conditions among older adults. Assessment of an older adult's ability to complete activities and instrumental activities of daily living (and to what extent they can access supports to optimize these abilities) is important (Moye, 1999). Recognizing signs of emotional, physical, sexual or financial abuse, or self-neglect in older adults is critical (Mellor & Brownell, 2006; National Center on Elder Abuse).

17.4.2 Assessment of Common Late-Life Psychological Disorders

While it is beyond the scope of this chapter to provide a solid review on late-life psychopathology and geropsychological assessment, we highlight common psychological disorders in older adults and recommend relevant assessment tools.

Depression. There exists a large research literature on the prevalence, phenomenology, risk factors, assessment, and treatment of geriatric depression. A few points to keep in mind about the potentially distinctive characteristics of late-life depression are presented in this section (Alexopoulos, 2003; Alexopoulos et al., 2002; Qualls & Knight, 2008; Zarit & Zarit, 2006). Some depressed older adults present with relatively few affective symptoms, and instead of sadness, complain of problems with motivation, interest, energy, memory, and somatic discomforts. Subsyndromal or minor depression is common in older adults and is associated with increased disability; that is, clinically significant depressive symptoms may not meet the DSM-IV criteria for major depressive episode in many older adults. There are strong relationships between medical illness and depression, anxiety and depression, and dementia and depression, and differential diagnosis in these contexts can be challenging because the symptoms of these syndromes overlap significantly. There is increasing evidence that cerebrovascular disease and related risk factors, such as hypertension, diabetes, and obesity, pose risk for a late-life depression syndrome characterized by apathy, executive dysfunction, and psychomotor retardation. The onset of depression for the first time in late life may be a precursor to dementia.

Assessment of depression in older adults necessitates a comprehensive interview about the individual's history, the onset and course of symptoms, relationship to medical and other presenting problems, risk concerns, social supports, and so forth (Karel, Ogland-Hand, & Gatz, 2002; Snarski & Scogin, 2006). Depression screening tools, used in primary care, mental health, or long-term care settings, can be used to determine the need for more comprehensive evaluation (Arean & Ayalon, 2005; Edelstein et al., 2008), as well as to track treatment progress over time. For older adults, the Geriatric Depression Scale (GDS; Yesavage et al., 1983) has received the most research attention, and is a reliable and valid screening tool. The GDS 30- and 15-item versions, and translations into multiple languages, are available at the GDS website (http://www.stanford.edu/~yesavage/GDS.html). The Cornell Scale for Depression in Dementia is a clinician-administered scale useful for older adults with dementia (Alexopoulos, Abrams, Young, & Shamoian, 1988). Several other tools can be used with older adults, depending on the care setting and cognitive capacity of the older adult (Beck Depression Inventory-II, Center for Epidemiologic Studies Depression Scale; Edelstein et al., 2008). Assessment of suicidality is critical in the context of late-life depression, and several tools can help with this assessment (Edelstein et al., 2008).

Anxiety. Anxiety in late life is more prevalent than depression. Anxiety is frequently comorbid with medical conditions, depression, and dementia (Beck & Stanley, 2001; Kogan, Edelstein, & McKee, 2000; Seignourel, Kunik, Snow, Wilson, & Stanley, 2008). Generalized anxiety disorder is a common concern for older adults, as is post-traumatic stress disorder. A variety of anxiety assessment tools have reasonable psychometric properties with older adults (Edelstein et al., 2008). While a variety of tools may be useful (Beck Anxiety Inventory, State-Trait Anxiety Inventory, Worry Scale, Penn State Worry Questionnaire, Hamilton Anxiety Rating Scale), most also have some limitations when used with older adults (Edelstein et al., 2008; Wetherell & Gatz, 2005). The Geriatric Anxiety Inventory is a promising new tool to keep an eye on (Pachana et al., 2007). Ongoing research will guide the choice of tools that are most useful for different subgroups of older adults.

Dementia, Delirium, and Behavioral Concerns. Dementia assessment entails obtaining a thorough history of the onset and course of symptoms, medical evaluation and laboratory tests to rule-out reversible causes, brain imaging, and often neuropsychological testing (Lichtenberg, Murman, & Mellow, 2003). Therefore, dementia assessment is best coordinated with an interdisciplinary team. A critical diagnostic distinction exists between dementia and delirium. While dementia can have many causes (e.g., Alzheimer's disease, vascular disease), it is typically progressive and rarely affects a person's alertness until at the very late stages. Delirium is an acute confusion state that is transient and usually reversible, characterized by deficits in attention, disorientation, difficulty in thinking clearly, and fluctuating alertness. Delirium is common in the context of dementia, and needs medical evaluation to determine the underlying causes (e.g., infection, medication reaction) (Fick, Agostini, & Inouye, 2002; Inouye, 2006). Geropsychologists must be alert to signs of delirium in older adults, and seek medical consultation in these cases.

In addition to cognitive changes, dementia is often associated with a range of psychiatric and behavioral symptoms, such as depression, apathy, anxiety, agitation, delusions, hallucinations, wandering, repeated vocalizations, and others (Steffens, Maytan, Helms, & Plassman, 2005). Observational and caregiver report tools are useful in the evaluation of problematic behaviors in dementia patients, who may not be able to provide accurate reports about their own symptoms and behaviors. One particularly helpful tool is the Revised Memory and

Behavior Problems Checklist (Teri et al., 1992), in which caregivers rate the frequency of a range of behavioral and mood symptoms and the extent to which each of those symptoms upsets the caregiver.

Alcohol and Substance Abuse. Substance abuse disorders are often overlooked in older adults and their prevalence is expected to increase as the current baby boom cohort moves into old age. Age-related metabolic and brain changes make older adults more vulnerable to functional consequences of substance misuse, abuse, or dependence (e.g., alcohol, prescription medications including benzodiazepines and narcotic pain medications, nicotine, and illicit drugs) (Sorocco & Ferrell, 2006; US Dept of Health and Human Services, 1998). Psychologists must ask older adults about their use of prescription and non-prescription medications, as well as alcohol and other drugs, and be aware that "safe" drinking limits decrease with age (for adults over the age of 65 years, the recommendation is no more than one drink per day). Alcohol screening tools useful for older adults include the Michigan Alcoholism Screening Test – Geriatric Version (MAST-G) (Blow et al., 1992) and the Alcohol Use Disorders Identification Test (AUDIT) (SAMHSA, 1998). The Substance Abuse and Mental Health Services Administration Treatment Improvement Protocol (TIP) on *Substance Abuse Among Older Adults* is an excellent resource and is available online.

Other Issues. Additional important foci of geropsychology assessment include personality disorders, psychotic symptoms, grief, insomnia, sexuality, caregiving stress, a wide range of behavioral health concerns (e.g., smoking, obesity, inactivity), and multiple adjustment issues (e.g., retirement, family changes, residential changes). Readers are encouraged to seek information about the assessment of these issues in older adults. There is a growing research base related to all these domains, as well as many validated screening and assessment tools that can help in the evaluation of an older adult client.

17.5   Intervention Competencies

17.5.1 Considerations in Providing Psychological Interventions with Older Adults

Older adults – particularly those of advanced aged – commonly have multiple problems. A common client is an older adult who exhibits three medical conditions, takes six medications, evidences a depressive syndrome with concurrent anxiety as well as mild cognitive impairment. The older adult may receive health services from five providers: an internist, two specialists, a psychologist, and a psychiatrist. Psychosocial stressors include a decreasing social network (owing to death or infirmity of friends), with concurrent reduction in social involvements, and financial difficulties. Particularly for older people, optimal care is integrative care in which members of the health care team work collaboratively to establish a health care plan, implement it, and make revisions of the plan as necessary (APA Presidential Task Force on Integrated Health Care for an Aging Population, 2008). However, most health care services are fragmented and not well-integrated. The psychologist must at least be knowledgeable about the client's physical and mental health and associated treatments, and life circumstances, and make a substantive effort to coordinate care with other providers. Problems need to be prioritized and the interaction among them recognized, monitored, and addressed (e.g., increasing depression leads to lessened adherence to medical regimens with subsequent decline in health).

Understanding what is normative about the lives of older adults informs psychological work with them. Knight's "contextual, cohort-based, maturity, specific-challenge model" (Knight, 2004) draws upon the substantive gerontology literature to guide clinical practice with this age group. This model asks the clinician to appreciate and understand the environments and institutions that are relevant to the lives of older adults, the generational experiences that have sculpted the way each generation looks at the world, maturational changes (both positive and negative), and common age-associated problems. This broad understanding of what is normative for older people is, of course, shaped by race/ethnicity, socioeconomic status, sexual orientation, gender, and the individual's unique life experiences.

The therapist makes efforts to enhance the therapeutic encounter. In view of the increasing prevalence of physical, sensory, and cognitive change in older adults, the clinician makes adaptations to optimize therapeutic services. Given the varied places where services are provided to older adults (e.g., community, outpatient, inpatient, long-term care settings), the location needs to be accessible to people with mobility problems. The clinician is alert to vision or hearing difficulties and makes needed adjustments to optimize communication (e.g., inquiring about hearing or sight difficulties, speaking clearly to the client, adjusting lighting to avoid unnecessary glare). For example, among people aged 65 years and older, two-fifths have trouble hearing and almost one-fifth have trouble seeing (Federal Interagency Forum on Aging Related Statistics, 2008). It may be particularly challenging to find a quiet, confidential setting for clients in institutional settings (e.g., inpatient hospital, nursing home). The current generation of older adults is more likely to consider the utilization of mental health services as stigmatizing than subsequent generations. Providing basic information about the nature and purpose of mental health services will often help to build rapport with the older client. With the consent of the client, gathering information from family members and other persons close to the client may be very helpful in understanding current problems and monitoring the progress of treatment. Family or other close relationship involvement is critical if the client has cognitive impairments.

The clinician is proficient in the use of therapeutic approaches which are more commonly used with older adults than with other age groups (Duffy, 1999). In view of the increasing medical problems of late life, clinicians are familiar with therapeutic interventions associated with end-of-life care and treatment of complicated bereavement (Ott, Lueger, Kelber, & Prigerson, 2007). Life review techniques developed for older adults may be useful in clinical practice. One major stressor of late life is care for an infirm relative. There is a large professional and lay literature on family caregiving, with a number of evidence-based treatments shown to reduce distress and improve functioning in caregivers. Several recent books provide good overviews of psychotherapy with older adults (Gallagher-Thompson, Steffen, & Thompson, 2008; Hinrichsen & Clougherty, 2005; Karel et al., 2002; Qualls & Knight, 2006).

17.5.2 Evidence on the Efficacy of Psychological Interventions for Older Adults

Evidence on the efficacy of psychotherapeutic interventions for older adults and their families has accumulated over the last 25 years. With some adaptation, most interventions developed for younger adults are useful and have similar effect sizes for older adults (Pinquart & Sorensen, 2001; Scogin & McElreath, 1994). In the subsequent discussion, we will review the evidence of

the utility of psychological interventions in the treatment of depression, anxiety, distress in family caregivers of infirm older adults, behavioral problems among older adults with dementia, sleep problems, and substance abuse. We will highlight reviews that identified Evidence Based Treatments (EBT) for older adults that used a manual developed by the Committee on Science and Practice of the Society of Clinical Psychology (Yon & Scogin, 2007). It is worth noting that, as a basis for practice, EBTs have been criticized on a number of grounds, including neglect of important practitioner-related factors that are tied to good treatment outcomes. EBT reviews have also set a high methodological standard for study results to be considered efficacious. Therefore, the following reviews are conservative in estimating the psychological interventions that are useful for older adults.

Depression. A wide variety of interventions for depression are effective in treating older adults. Scogin and colleagues (Scogin, Welsh, Hanson, Stump, & Coates, 2005) found that behavioral therapy, cognitive behavioral therapy, cognitive bibliotherapy, problem-solving therapy, brief psychodynamic therapy, and reminiscence therapy are effective in treating older people. Other psychotherapies for depression were identified to be promising (e.g., interpersonal psychotherapy, Hinrichsen & Clougherty, 2005), but lacked a sufficient corpus of acute treatment studies to be included in the analysis. For example, despite interpersonal psychotherapy's well-demonstrated efficacy in the acute and longer-term treatment of depression in adolescents and adults (Weissman, Markowitz, Klerman, 2000), further evidence is needed to establish its efficacy in older people. Observations of Scogin et al. generally support earlier reviews of the literature on the efficacy of psychotherapy in the treatment of late-life depression (Arean & Cook, 2002; Gatz et al., 1998; Karel & Hinrichsen, 2000).

Anxiety. Despite estimates that up to 10% of older adults have anxiety disorders (Flint, 1994), the number of treatment studies of anxiety disorders is much more limited than those of late-life depression. In their review of evidence-based treatments, Ayers and colleagues (2007) concluded that "psychosocial interventions are moderately efficacious" (Ayers, Sorrell, Thorp, & Wetherell, p. 12) in treating anxiety disorders in older people. Treatments with evidence to support their efficacy include cognitive behavioral therapy, relaxation training and, to a limited extent, supportive therapy. There are limited data on the treatment of anxiety disorders other than those for generalized anxiety disorder (e.g., phobias, panic disorder, and obsessive-compulsive disorder).

Distressed Family Caregivers of Older Adults. As noted earlier, family members providing care to older adults with health problems and dementia are at risk for adverse mental health outcomes (Schulz & Matire, 2004). Numerous psychosocial interventions have been developed to reduce distress and improve mental health outcomes in this group. Gallagher-Thompson and Coon (2007) reviewed the evidence for the utility of psychologically informed, evidence-based treatments in reducing distress and improving the well-being of family members providing care to older adults with health problems and dementia. They found that psychoeducational skill-building interventions (e.g., increasing knowledge, enhancing coping and behavioral skills), psychotherapy-counseling (including behavior therapy, cognitive therapy, and cognitive-behavioral therapy), and multicomponent interventions (e.g., combinations of support group, respite, family counseling) are all effective in reducing caregivers distress. Cognitive behavioral approaches are especially useful and demonstrate robust effect sizes.

Behavioral Interventions for Problematic Behaviors in Older Adults with Dementia. Mental health and behavioral problems are common among people with dementia, and are especially taxing for family members and staff in institutional settings who must manage them. Logsdon,

McCurry, and Teri (2007) reviewed the evidence for the efficacy of psychologically informed interventions for persons with dementia who had a variety of behavioral problems. The research data support efficacy of two approaches. First, the progressively lowered stress threshold (PLST; Gerdner, Hall, & Buckwalter, 1996) is an educational intervention designed to improve family caregivers' ability to understand and manage behavioral problems in a relative with dementia. Second, the Seattle protocol (Teri, Logsdon, & McCurry, 2005) teaches behavioral skills to family caregivers to improve well-being and functioning, as well as decrease behavioral problems in relatives with dementia. Both approaches share problem-solving and behavioral-activation elements. Other non-psychologically informed interventions to improve behavioral problems in persons with dementia were not the focus of their review.

Treatment of Sleep Problems. Sleep problems are common among older adults and are associated with increased risk for a number of mental health problems and symptoms (Lichstein, Stone, Nau, McCrae, & Payne, 2006). McCurry and associates (McCurry, Logsdon, Teri, & Vitiello, 2007) reviewed evidence on the efficacy of sleep treatments that were based on psychological principles. Two treatments were identified as efficacious. These include sleep restriction–sleep compression (i.e., reducing the duration of time spent in bed to correspond to the actual time spent sleeping) and multi-component cognitive-behavioral therapy (CBT). Multicomponent CBT includes education about sleep, relaxation training, sleep restriction, and stimulus control (i.e., strengthening association of bed with sleep and not other activities).

Alcohol Abuse. Older adults have been shown to benefit from a range of treatments for alcohol abuse, including brief counseling interventions in primary care settings, cognitive-behavioral approaches, and motivational counseling (Sorocco & Ferrell, 2006). In general, older adults appear to respond better to treatment approaches that incorporate age-appropriate components, including non-confrontational approaches, attending to negative emotions, slowing pace and content of treatment, recognizing age-specific psychological, social, and health issues, and linking to aging services as needed (Gurnnack, Atkinson, & Osgood, 2002; SAMSHA, 1998; Sorocco & Ferrell, 2006).

Study Limitations. While a solid body of evidence on the efficacy of psychological interventions for older adults now exists, there are a number of limitations with most of these studies. Most studies do not include the "oldest old" (i.e., individuals 85 years of age and older), who often have multiple medical problems and whose mental disorders may be more difficult to treat than those in younger older adults. There are a limited number of studies on older adults residing in long-term care settings. Studies often do not include individuals with multiple mental disorders who are likely to be more difficult to treat than those with single mental disorders. There is also limited research on the treatment of minority older adults. Finally, most studies evaluated the efficacy of acute (i.e., short-term treatments) and not long-term treatment.

17.6   Consultation Competencies

Consultation is integral to providing clinical services to older adults, and is interwoven with the work of a geropsychologist. Geropsychologists work in concert with families and other members of the older person's social network, health care and non-health care professionals, and agencies. Gathering and sharing information with members of this network, with the older client's consent, optimizes care.

Many older adults seek mental health services at the behest of someone else – primary care physician, family member, friend, neighbor, or agency. Often, these individuals are interested in understanding the problems with which the older adult is contending, the plan of care, and the client's progress as mental health services are provided. We want to reemphasize that consultation is provided with the consent of the client. Some older adults feel that they become invisible when a family member accompanies them to a medical or mental health appointment. One client who was being evaluated by one of the authors pointedly reminded him of this fact after an initial interview and prior to having her daughter join us to provide additional information. "When my daughter is here, remember that I am the patient, not her. And don't forget to continue to make eye contact with me when she's in the room." Consultation is provided to family members in a manner that is clear, frank, supportive, and hopeful. Family members often wonder what they can do to be helpful, and practical recommendations and, if needed, referral to other resources for themselves can be made (e.g., psychotherapist, support group, bibliographic resources).

Similarly, other professionals and agencies may request a status report on client progress and recommendations on how they might best deal with mental health issues that affect their ability to deliver effective services to their clients. For example, the primary care physician may be concerned when the seriously depressed older adult does not adhere to dietary and medication recommendations, and may seek guidance regarding how to best address these issues with the client in medical appointments.

Psychologists have increasingly played an important role in the delivery of mental health services to older adults in long-term care residential facilities (Rosowsky, Casciani, & Arnold, et al., 2008). A very high prevalence of dementia and other mental disorders exists in these settings. Many clients have concurrent mental health and physical health problems within settings that have complex institutional, interprofessional, and interpersonal dynamics. In addition to providing individual care to clients, geropsychologists are often asked to provide guidance on how to address a wide range of problems: The resident is constantly in conflict with the staff and other residents. The resident is frequently agitated for reasons that are not clear. The resident assaults a nursing aide. The resident refuses to join other residents in communal activities or be bathed. Consultation on these and other issues requires not only an understanding about the individual client, but also the interpersonal, institutional, and environmental factors that may contribute to the identified problem and, if modified, may reduce the problematic behavior. Client "problems" may be a predictable response to a problematic environment that needs to be changed rather than the client (Burgio et al., 2002; Stevens & Hochhalter, 2006).

A general consensus exists that the U.S. system of health care is fragmented and poorly integrated. Such a system is too often ill-suited to the needs of older adults, many of whom have chronic health problems and multiple providers. Fragmented care can be especially problematic for chronically ill older adults with mental health problems (Bartels, 2003; Wenger et al., 2003). While the U.S. health care system is fragmented, there is also general consensus that integrated care is better care. Integrated care is a holistic approach to providing care and is characterized by sharing of information and professional expertise, setting goals, and addressing patients' problems within teams of professionals. Psychologists have a set of assessment, treatment, and consultation competencies that can make a substantive contribution to integrated care. Integrated care exists in some health care sectors, notably in the Department of Veterans Affairs health care system, which serves a large population of older adults. A recent

report by the APA, *Blueprint for Change: Achieving Integrated Health Care for an Aging Population* (APA Presidential Task Force on Integrated Health Care for an Aging Population, 2008), outlined the role that psychologists can play in providing integrated care. Although many geropsychologists provide services in poorly or partially integrated care settings, they are encouraged to weave integrative care principles into their work and strive to refashion existing health delivery systems.

Geropsychologists have a long history of researching and reshaping the environments in which older people reside or receive care (Lawton, 1990), and in how the care is organized and delivered (Zeiss, 2003). Geropsychologists may provide consultation to groups, organizations, and government. Increasingly, geropsychologists have played a role in advising and developing public policy initiatives to improve care delivery to older Americans (Elmore, 2006). Given widespread misinformation about older adults, geropsychologists can educate the general public and other professionals about what is normative about the aged as well as the unique problems and resources possessed by older people (APA Working Group on the Older Adult, 1998).

17.7   Settings of Care for Geropsychology Practice

The Pikes Peak competencies explicitly address the fact that geropsychologists work with older adults across a wide range of care settings, including but not restricted to: outpatient mental health services, outpatient primary care/medical settings, inpatient medical settings, inpatient psychiatric settings, long-term care settings including nursing homes, assisted living facilities and day programs, rehabilitation settings, hospice care, community-based programs, forensic settings, home-delivered psychological services, and research settings (Knight et al., 2009). While most psychologists who work with older adults may not have the interest, training, or competence to serve older adults in all these settings, it is recommended that geropsychologists work competently in at least two of these care settings.

Several of these settings deserve special mention. Most practicing psychologists are familiar with outpatient mental health treatment settings, including community mental health and private practice settings. Currently, psychological services for older adults are growing in primary care, long-term care, and end-of-life care settings. As these settings may be less familiar to readers, we provide additional information on these select settings.

Primary Care. The current generation of older adults rarely self-refers for psychological services. Instead, most of the older adults who get connected to mental health care do so through their primary care providers, or through concerned family members. Most older adults seek regular medical care and, thus, the doctor's office truly offers the best opportunity for screening, evaluation, and intervention for mental and behavioral health problems. Several large, multi-site studies over the past decade have demonstrated the effectiveness of various models of assessing and treating geriatric depression, suicidal thoughts, anxiety, and substance abuse in the primary care setting (Bartels et al., 2004; Bruce et al., 2004; Hunkeler et al., 2006). These models are consistent with the growth of integrated care more broadly, and primary care psychology, more specifically (e.g., Frank, McDaniel, Bray, & Heldring, 2003).

Psychologists who work in primary care are likely to have older adult clients, and can work to identify areas for further training in geropsychology based on self-evaluation of their competencies described in this chapter. Furthermore, psychologists who wish to expand their

practices with older adults can consider co-locating or collaborating closely with primary care practices (Hartman-Stein, 2006). Primary care psychology has its own knowledge and skill base, and hence, psychologists who wish to treat older adults in primary care should also develop competencies for primary care practice (Frank et al., 2003). Recommendations about geriatric depression screening, evaluation, and treatment in primary care settings have been provided by Arean and Ayalon (2005). Problem-solving therapy, interpersonal therapy, and cognitive-behavioral therapy have been successfully adapted to help depressed older adults in primary care settings (Arean & Ayalon, 2005).

Long-Term Care. Long-term care for older adults occurs in settings as diverse as skilled nursing facilities (or nursing homes), assisted living facilities, community day-care programming, and at home. Nursing homes, in particular, have become a growing setting for psychological practice since 1989, when psychologists could be reimbursed as independent Medicare providers. In fact, many psychologists began to work in long-term care settings, often without adequate training. Recognizing the need for standards of care, a professional group, Psychologists in Long-Term Care (PLTC; http://www.wvu.edu/~pltc/), published the Standards for Psychological Services in Long-Term Care Facilities (Lichtenberg et al., 1998). The standards are recommendations for appropriate referral for psychological services in long-term care settings, assessment, treatment, and related ethical issues.

An increasing number of resources are available to psychologists who want to develop the knowledge and skills to practice in long-term care settings. Good practice in long-term care includes an understanding of the medical, neurological, psychiatric, and psychosocial co-morbidities common in older adults who need assistance or skilled nursing care; working ethically and effectively with an interdisciplinary team, including supporting staff in environmental and behavioral interventions; and knowing and applying evidence-based practices for psychological assessment and intervention with physically and/or cognitively disabled older adults. Multiple books, review articles, and chapters on these issues have been published in the past decade (Frazer, 2006; Hyer & Intrieri, 2006; Molinari, 2000; Norris, Molinari, & Ogland-Hand, 2002; Powers, 2008a). PLTC has published a training manual that psychologists can use to help train others (Rosowsky et al., 2008). The research base supporting psychological practice in long-term care is developing (Powers, 2008b), along with opportunities for continuing education.

End-of-Life Care. Until recently, few psychologists were involved in clinical practice, research, or training regarding care of patients at the end of life. While terminal illness can strike people of all ages, older adults represent the majority of dying individuals. Likewise, psychologists who work with older adults will undoubtedly confront issues of death and dying more frequently than those who work with other age groups. Geropsychologists benefit from knowledge regarding the experience of advanced illness and the dying process; ethnic, cultural, and spiritual influences relevant to illness and end-of-life care; models of hospice and palliative care; the impact on family members providing care at the end of life; and bereavement and grief. Psychologists can make important contributions in helping patients and families with: advance care planning, coping with life-threatening illness, the dying process, and bereavement care (Haley, Larson, Kasl-Godley, Neimeyer, & Kwilosz, 2003; Werth & Blevins, 2006). There are growing opportunities for psychology continuing education about end-of-life care, including APA-sponsored workshops, books, and an online series of ten interactive training modules including audio and video vignettes (see http://www.apa.org/ce/).

17.8   Basic versus Expert Geropsychology Competencies

Basic competence in geropsychology is important for any psychologist who comes across older adults in practice. Expert-level competence is reserved for those whose practice is devoted to a wide range of diverse, complex older-adult clients, practicing across multiple care settings, as well as for those who provide training and supervision to psychologists learning to develop geropsychology competence.

Development of professional competence occurs gradually over the course of one's training and professional career. A useful competency development framework is described by Hatcher and Lassiter (2007). The framework considers five stages of development: novice, intermediate, advanced, proficient, and expert. A novice has very little experience, is unable to recognize patterns or themes, and needs intensive supervision. At the other end of the spectrum, an expert has developed almost an intuitive sense of clinical situations based on tremendous experience, and serves as a consultant or teacher to others. With ongoing training and development, the professional is able to function with increasing autonomy and decreasing need for supervision or consultation.

In defining basic versus expert geropsychology competence, it is not so much which Pikes Peak competencies are relevant or not at the basic level; all the competencies are relevant and important. Rather, it is important to determine at what level of processing and independent functioning the psychologist can address each competency that distinguishes basic versus expert competence in the field. Our working model is that a psychologist with basic geropsychology competence can work with older adults at the intermediate or advanced level (typical of an advanced practicum or internship student), while a geropsychology expert works with older adults at the proficient and, in some domains, expert levels.

17.8.1 Depth and Breadth of Practice

Depth and breadth of geropsychology practice have implications for training and development of basic (intermediate or advanced) versus expert (proficient or expert) competencies. At a basic level of geropsychology competence, a psychologist must be aware of the common issues that affect older adults and their families, know what questions to ask, and have enough knowledge and skill to at least do appropriate screening and referral for further assessment, consultation, or treatment as needed. Psychologists with basic geropsychology competence should know enough about the landscape of geropsychology practice to inform their own "metacompetence" – to have an accurate sense of what they know and do not know in working with a particular older adult, with a particular diagnostic picture, in a particular care setting. A psychologist with basic competence may not be able to continue assessment or treatment in depth, but knows enough to consult or refer out. An expert may be able to not only recognize the possible issues contributing to an older adults' presentation, but independently complete a full evaluation (often with multiple sources of information, informants, perhaps standardized testing) as well as devise and implement a treatment plan (which also may have multiple elements such as individual therapy, family consultation, interprofessional collaboration, community care coordination).

Breadth of practice is important as well. A psychologist with basic geropsychology competence may provide assessment and treatment of older adults which is limited to a particular

setting or population of older adults. For example, a psychologist who works with severely mentally ill adults in inpatient settings may learn about special issues in psychopathology and risk assessment in late life, but perhaps not gain fuller breadth of competence to work with older adults in community-based settings. On the other hand, a psychologist who specializes in couples and family therapy may develop basic competence to work with older couples who are essentially cognitively intact and wishing to work on late-life marital and family stresses (and be able to note "red flags" for issues that may require further evaluation or consultation), but perhaps not gain competence to provide psychological consultation in nursing home settings. However, a geropsychology expert has greater breadth of competence in being able to meet the mental health needs of a wide range of older adult clients across a wider range of care systems. Certainly, no single professional can be an expert at everything, and a geropsychology expert should know the limits of his or her competence and know when to refer to or consult with colleagues who have expertise in the areas in which he or she does not.

17.8.2 Defining Basic Versus Expert Geropsychology Competencies

Within the field of geropsychology, there has been some effort to define basic versus more advanced practice in the field. The APA Interdivisional Task Force on Qualifications for Practice in Clinical and Applied Geropsychology, whose work led to the publication of the APA *Guidelines for Psychological Practice with Older Adults* (2004), defined three levels of geropsychology training: (1) general exposure to aging; (2) training compatible with proficiency in geropsychology practice, and (3) training compatible with geropsychology specialty expertise (Molinari et al., 2003). A Department of Veterans Affairs working group (the VA Technical Advisory Group in Geropsychology) took on a project that resulted in "Recommendations about the knowledge and skills required of psychologists working with older adults" (Molinari et al., 2003). The project was initiated to address the need for VA psychologists, in particular, to develop competencies to work with the aging veteran population, but resulted in recommendations pertinent to any psychologist working with older adults. These recommendations address two levels of practice: Level 1 refers to the knowledge and skills that all psychologists should have to work competently with older adults in general practice, and Level 2 refers to the knowledge and skills required for practice and training by specialized experts in the field. Recommendations for Level 1 and Level 2 functioning were made for seven broad competency areas.

The Pikes Peak geropsychology competencies were aimed somewhere between Level 1 and Level 2, as defined by Molinari et al. They were geared towards newly licensed professional psychologists who have completed a year of geropsychology postdoctoral training – not yet experts, but having developed more than basic competence. Based on the Pikes Peak competencies and the work by Molinari et al., we have attempted to outline what we believe are essential (basic) competencies for work with older adults, knowing that this issue remains open in this field and that other geropsychologists may have different opinions. We argue that geropsychology expertise entails having the full complement of knowledge and skills outlined in this chapter. A geropsychology expert had achieved significant breadth and depth of experience in applying the Pikes Peak competencies to work with diverse older adults with a wide range of diagnostic and life problems, across various care settings.

17.8.2.1 Foundational Attitude, Knowledge, and Skill Competencies

The foundational geropsychology competencies, as described earlier, are all critical for basic geropsychology competence. Within these foundational skill competencies (e.g., self-reflection, appreciation of diversity, ethical practice), the core attitudes that must inform competent practice with older adults are embedded. The Pikes Peak Model acknowledges the importance of these core attitudes, including recognition of one's scope of competence, self-awareness of attitudes and beliefs about aging and older adults, appreciation of diversity among older adults, and commitment to continuing education. Likewise, basic knowledge about adult development and aging must inform clinical practice with older adults; that is, not all older adults are the same, aging encompasses both growth and decline across domains of functioning, and older adults are generally experts at optimizing their strengths and compensating for losses. Here, we highlight the competencies that we believe are critical to basic professional competence in working with older adults.

Perhaps the most important aspect of professional psychology functioning in general is self-awareness and self-reflection – regarding one's own potential biases, discomforts, and professional competencies (Falender & Shafranske, 2007). Basic competence in professional geropsychology requires enough self-awareness and knowledge to be able to counter aging stereotypes, to question one's assumptions about what is "normal" for an older person in terms of health, mood, memory, everyday functioning, and relationships (e.g., is it "normal" for an older person to be depressed, forgetful, and lonely?). Possibly biased assumptions can lead to unfortunate missed opportunities for helping older adults whose suffering can be alleviated. Thus, basic geropsychology competence does require basic knowledge about normal versus pathological aging (APA, 2004; APA Working Group on the Older Adult, 1998).

Similarly, basic competence for geropsychology practice requires a respectful, collaborative, and genuine relationship stance with older adults. For a variety of cultural and individual reasons, we often observe health care professionals communicate with older adults as if they were children or ignore them if other family members are in the room. On the other hand, some may grow impatient with an older adult's stories or, perhaps, slowness to respond to questions. It is important for psychologists to feel comfortable being with older adults and be aware of the possible disrespect or exaggerated respect that can get in the way of collecting important clinical information. Our students often have difficulty interrupting older adults, not wanting to be disrespectful, and must learn how to interrupt and guide an interview in a respectful and constructive manner.

The importance of appreciating diversity among older adults is related to the relationship with and respect for older adults. Respect for diversity includes challenging our own biases or stereotypes about aging in general, as well as about particular subgroups of older adults. Each older person would have accumulated 60–100+ years of unique individual experiences in their own cultural and environmental context, which may make it difficult to carry out age-based generalizations. It is incumbent upon psychologists working with older adults to work to learn about the individual's life experience and related values, beliefs, goals, and strategies for coping.

A critical and basic competency in working with older adults is to know where to go for more information or resources. While it is not realistic to ever know all there is to know about working with older adults, it is important to have a good sense of where to go for help. Such resources include community information and referral services for older adults and families (e.g., local aging services office), geriatric medical, psychiatric, neurology providers in one's

community; local residential, social, and day-care services for older adults; websites with information about aging-related conditions; and professional geropsychology organizations that facilitate sharing of information and resources. Knowing where to find information is a critical and basic competency in any field.

Finally, another basic foundational competency is to practice the business of geropsychology ethically and legally. Geropsychologists, particularly those working in private or fee-for-service practice settings, must be aware of evolving Medicare and Medicaid policy and know how to bill appropriately for the services rendered.

17.8.2.2 Assessment

Basic geropsychology assessment competence entails being able to appreciate the potential complexity of differential diagnosis in this population, screen for a range of possible contributing problems (as well as strengths), and consult, collaborate, or refer to other providers if needed to help clarify a case conceptualization. Again, it is the capacity to have the sense that "maybe I'm in over my head here," being able to ask good questions, and knowing where to seek assistance which are important. Many older adults present with fairly straightforward concerns that can be addressed by one's general professional psychology competence. When the situation appears more complex, psychologists with basic geropsychology competence should seek help if needed.

Recognizing potential risk is a basic competency for working with older adults. "Risk assessment" with older adults may differ significantly than that with younger adults. Psychologists need to be aware of signs of poor self-care, elder abuse or neglect, substance abuse, as well as signs of risk of harm to self or others. Risk management in older adults is ethically and clinically challenging. On one hand, a novice might miss important signs of risk and not take steps necessary to help protect an older adult's safety. On the other hand, a psychologist with limited experience with older adults may take an overprotective stance and threaten an older adult's autonomy unnecessarily. Large "gray areas" characterize risk assessment with older adults, and the responses by professionals are not only influenced by professional knowledge and skill, but also by our own cultural and individual beliefs and ability to tolerate risk (e.g., should a frail older woman who has had several falls continue to live alone?). Good supervision and consultation are important to help develop skill in this area.

17.8.2.3 Intervention

As discussed earlier, older adults generally benefit from psychotherapy interventions for a range of psychological problems. Psychologists who have developed proficiency or expertise in providing particular psychological interventions (e.g., CBT for depression) should have little difficulty adapting their knowledge base and skills to help older adults. Basic geropsychology competence entails being able to adapt psychological interventions to developmental, cohort, or contextual circumstances of older adults (e.g., adjust to sensory deficits, be aware of possible contributions of medical or medication factors, be aware of possible stigma associated with being a mental health patient, determine how best – ethically and clinically – to address the fact that the patient's daughter wants to know what's going on).

In addition, basic competence entails being able to evaluate if a particular psychological intervention appears appropriate for a particular older adult (e.g., an extreme example is that

one would not begin a course of CBT with an older adult who is clearly confused and possibly needs a medical evaluation). When the problems of the older adult become more complex – at the individual, family, and/or broader systemic levels – the psychologist with basic geropsychology competence may need to consult or refer to a geropsychology expert.

17.8.2.4 Consultation

Basic respect for and ability to collaborate with other professionals is foundational to geropsychology practice. Similarly, the ability to interface ethically and appropriately with family members and other care providers of an identified older adult patient is a basic geropsychology competency. As discussed earlier, sometimes a "problem" with an older adult is more a problem with the system that can be remedied by working with the family, health care provider, or changing the environment. Basic geropsychology competence entails being able to consult with various stakeholders in the system, communicate clear biopsychosocial conceptualizations of a problem, and elicit a team or systemic response if needed.

Certainly, these inter-professional and systemic issues can become quite complex and ethically difficult if the older adult does not have the capacity to provide informed consent for sharing information with family or other team members. Geropsychology experts are able to negotiate complex ethical and clinical terrain in their consultation activities. Further, geropsychology experts are more likely to provide formal education and training to others (e.g., nursing staff), and help teams devise behavioral or environmental interventions, as well as develop and evaluate new geriatric care programs. Finally, as stated earlier, geropsychology experts may serve as consultants to a range of organizations and as policy advocates at local, national, and international levels.

17.9   Transition from Basic to Expert Competencies

The Pikes Peak Model of geropsychology training acknowledges that pathways to geropsychology competence will vary greatly from one psychologist to an other. Relatively few new graduate students in psychology choose to specialize in aging early in their careers. Those who discover this interest early often follow a path from graduate school, internship, and postdoctoral training, all of which provide geropsychology didactic and experiential training. These individuals will develop geropsychology expertise in many domains by the time they finish postdoctoral training. Most trainees will discover their interest in aging later on, during an internship rotation and, for most psychologists, after completing formal training in the field. Many psychologists find themselves working with older adults "on the job," or discover a growing interest as they, or family members and friends, start to grapple with the challenges faced by aging individuals and families.

Therefore, the Pikes Peak Model does not endorse a particular training plan, but recommends core components of training that could be sought at any time during one's training career. These core training experiences are recommended to inform basic geropsychology competence. We recognize that these training recommendations are aspirational ones, and it is more difficult to access them the farther one is in one's career from formal training settings. It is incumbent upon the field of geropsychology, as well as upon resourceful psychologist learners, to develop and access opportunities for geropsychology training, particularly supervised experiential training (Karel et al., in press).

Key elements of a professional geropsychology training program include: (1) learning about normal aging to understand abnormal aging experiences (e.g., through the equivalent of a one-semester course on psychology of aging, and can be accessed through continuing education); (2) learning about core clinical issues for older adults, such as psychopathology in late life (e.g., through the equivalent of a one-semester course on clinical geropsychology, and can be accessed through continuing education); (3) gaining direct clinical experience with diverse older adults across different care settings (e.g., to gain exposure to relatively healthy as well as frail older adults); (4) facilitated experiences to gain self-awareness about one's responses to aging that may vary with respect to cultural and individual identities, disability status, and diverse cohort experiences; (5) supervision by competent geropsychologists, using observational methods at some point; (6) inter-professional team training – learning about the knowledge base, scope of practice, and distinct professional work styles of other disciplines; and (7) learning about the distinct ethical and legal issues and practice standards that underlie practice with older adults (Knight et al., 2009).

Ideally, developing geropsychology competence entails some opportunity for supervised clinical practice with older adults, with opportunities for observation of one's work – through direct observation, audio- or video-taping, or co-therapy. A psychologist who is new to working with older adults may simply not have the awareness of biases or "blind spots" brought into the consultation room, and may, therefore, not be able to tell a supervisor or consultant about those problems. For example, learning to recognize signs of mild cognitive impairment may take practice and experience; a novice psychologist will benefit from working closely with a supervisor who can point out behavioral signs of possible cognitive problems. Likewise, the opportunity to function as a psychologist on an interdisciplinary geriatric care setting is important for developing geropsychology competence. Certainly, for psychology interns and fellows in training, learning to "find one's voice" as a psychologist in a medically-oriented team environment is a very important part of professional development as a geropsychologist.

Developing expert competencies in geropsychology requires greater depth and breadth of training and, subsequently, ongoing professional experience and continuing education. There are growing opportunities for formal postdoctoral training in geropsychology (Hinrichsen et al., in press), which is certainly the most efficient way to get a "jump start" on becoming an expert geropsychologist. Others develop geropsychology expertise by applying their training in related fields, such as health, rehabilitation, or neuropsychology, to work with older populations. These psychologists subsequently learn more about aging issues through on-the-job training, self-directed reading, continuing education workshops, and consultation or supervision with colleagues. We know several geropsychology colleagues who have developed expertise in the field through post-licensure training, by taking several graduate classes and arranging for supervised experience with geropsychologists and/or geriatric neuropsychologists in settings serving older adults.

Another important part of developing, and maintaining, geropsychology expertise is keeping up-to-date with advances in research, policy, and clinical program development. The field of geropsychology has advanced to the point where there are many resources to help psychologists learn and keep up with the field. Leading journals in the field include *Psychology and Aging*, *Journals of Gerontology*, *The Gerontologist*, *Clinical Gerontologist*, *American Journal of Geriatric Psychiatry*, *Journal of Geriatric Psychiatry and Neurology*, as well as many journals devoted to the related fields of geriatrics, dementias, palliative care, and so forth. Additionally, geropsychology research is widely published in general clinical psychology journals.

Professional organizations including APA's Society of Clinical Geropsychology (Division 12, Section II, at http://www.geropsych.org/), APA's Division on Adult Development and Aging (Division 20, at http://apadiv20.phhp.ufl.edu/), and PLTC (http://www.wvu.edu/~pltc/) provide informative websites and list-serves, including active discussions about policy updates with respect to the psychologists' ability to provide care for older adults under Medicare. The APA Office on Aging has an excellent website with links to many resources to inform clinical practice with older adults (http://www.apa.org/pi/aging/). Likewise, the newly formed Council of Professional Geropsychology Training Programs (CoPGTP) has a website that can serve, among other things, as a resource for identifying training opportunities in the field, at all levels l of training including post-licensure continuing education (http://www.uccs.edu/~cpgtp/).

17.10 Summary

Professional geropsychology is a growing area of practice within professional psychology. Given the reality of demographics, most psychologists will need to develop basic competence to work with older adults, while growing numbers of psychologists will need to develop expertise to serve as teachers, supervisors, and consultants. Psychological practice with older adults, their families, and related care systems is intellectually and personally challenging and rewarding. As the population (including psychologists) continues to grow older and with increasing opportunities for geropsychology practice and training, we anticipate that increasing numbers of psychologists will seek to develop competence to work with older adults.

The Pikes Peak Model for geropsychology training defined attitude, knowledge, and skill competencies for professional geropsychology practice. In this chapter, we have provided a "bird's eye" view of these competencies: the knowledge base in adult development and aging, foundational skill competencies for geropsychology practice, and functional competencies in the domains of assessment, intervention, and consultation. We have highlighted several settings of care for geropsychology practice, and have provided a framework for considering the development of basic through expert competencies in the field. Furthermore, we have made recommendations for the essential components of basic geropsychology competence, and have reviewed the core components of a training program to develop basic geropsychology competencies. While this chapter necessarily provides a broad overview, we hope to have inspired interested readers to pursue further information through our referenced works and, perhaps, further training in this exciting and meaningful area of professional psychology practice.

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18 Pharmacological Adjuncts

William J. Burns · Jose Rey · Kayreen A. Burns

Abstract: There is a broadly accepted list of basic competencies that are expected of a licensed clinical psychologist. In the case of a clinical psychologist with advanced training in Clinical Psychopharmacology (CPP), who is engaged in prescribing or consulting about medications, there is also a list of acceptable basic competencies. In order that psychologists may achieve basic competency in psychopharmacology, they need to begin with a solid core of academic learning and clinical practicum in psychopharmacology that will motivate them to continue to progress in competency as they engage in this specialized field of patient care. To progress from basic to expert competency, most clinicians trained in CPP will need years of experience. The route to expert competency is made more complex by the added burden of combining two disciplines effectively. Since there is no national board exam for diplomate status in CPP, the competencies of an expert need to be defined informally by colleagues in the field. There is no doubt that experts are appearing among the small group of men and women who were first to enter this career. The knowledge and experience that drive the transition from basic to expert competence reaches beyond an academic program. It must be nurtured by the experiences that these professionals encounter in their practice and especially by the input of other competent practioners who provide professional models for this new generation of prescribing and consulting psychopharmacologists.

18.1 Overview

The field of psychology has made significant progress over the past decades in the understanding of psychopathology and the development of effective methods of psychological treatment for mental disorders. During the same period of time, the fields of pharmacology and medicine have been making similar progress in the understanding of the underlying chemical mechanisms of psychopathology and the development of effective methods of psychopharmacological treatments for these disorders. During the past decade, an exciting progress has taken place within the field of psychology to combine these two endeavors in one practitioner, the prescribing psychologist (Burns, Rey & Burns, 2007). Some members of both psychology and medical communities have stepped forward to express their doubts about the efficacy and safety of such a synergistic treatment modality. However, following the practice of prescribing psychologists in the military for a decade and more recently following the successful and safe practice of the combined area of health service in New Mexico and Louisiana, these doubts began to disappear. How did these prescribing psychologists become competent in such a complex combination of tasks? How can we be sure that they will, not only maintain their competency, but progress to expert competency? It is the objective of this chapter to answer some of these questions and describe the route by which competency is attained by a prescribing or consulting psychologist who has postdoctoral training in clinical psychopharmacology.

The editors of this volume have given this chapter a title that uses the word "adjuncts" to describe the relationship of pharmacology with psychology. Psychologists have been trained to view medications as a supplementary type of intervention for patients with mental disorders. And, indeed, licensed psychologists, who have sought advanced training in clinical psychopharmacology, have done so after they have completed their doctoral degree, internship, residency, and licensing exam. The administrative council of the American Psychological Association has voted to make such a sequence of study mandatory, because they want to make sure that psychologists view themselves first and foremost as psychologists, and only secondarily as prescribers of psychopharmacological medications. Regardless of the order of education, a prescribing or consulting psychologist must attain basic competence in both disciplines to treat patients competently.

18.1.1 Critical Competencies Needed

There is a broadly accepted list of basic competencies that are expected of a licensed psychologist. It is agreed that they must know how to evaluate and conceptualize the cases they have received. They must use evidence-based interventions, as well as understand the maintaining factors and mechanisms operative in their patients. They must be able to digest and use both the research and program evaluation literature. They must show basic competence as they engage in supervision, management, and consultation. They must appreciate the impact of diversity and cross-cultural values in the patients to whom they extend their service. They must show basic competence in their ethical behavior.

In the case of a clinical psychologist with advanced training in Clinical Psychopharmacology (CPP), who is engaged in prescribing or consulting about medications, there is also a list of accepted basic competencies. These cross-discipline professionals must know how to evaluate and conceptualize cases of patients with physical disease. They must have basic competence in evidence-based medicine, especially in psychopharmacological medications. They must be knowledgeable in maintaining factors and underlying mechanisms in disease and medical treatment. They need basic competence in psychopharmacological supervision, management, and consultation. They must appreciate the impact of diversity and cross-cultural factors in diseases. They must show basic competence in their ethical behavior as they treat their medical patients. They must know when to refer to medical specialists and how to combine their clinical psychology competence with their competence in medicine.

18.1.2 Expert Competency

Because the list of competencies is very long and difficult to accomplish for clinical psychologists who have advanced training in CPP, not many psychologists will step forward to enter this new cross-discipline. And only some of those who seek this training will progress beyond the consultation level to become actual prescribers. The route to expert competency is made more complex by the addition of extra competencies and by the added burden of combining the two disciplines effectively. Since there is no national board exam for diplomate status in CPP, the role of expert needs to be defined informally by colleagues in the field. There is no doubt that experts are appearing among the small group of men and women

who are first to enter this career. They are the CPP psychologists who were first trained in the military, or who were successful in obtaining legislation for prescription privileges in the states of New Mexico and Louisiana. They are currently serving as officers in Division 55 and administering programs in postdoctoral education in CPP. They have written books and chapter, articles, and manuals. They have presented at conferences and have given testimony to congress and state legislatures for their expertise in this new discipline. They have been acknowledged as experts, and have expert competencies in many of the skills listed above. They progressed to expert competency in the hard way, through persistent effort to learn the knowledge base of their cross-discipline, through many hours of clinical practicum, clerkship, and supervision at their own expense, and through consistent effort to keep up with the research in their field.

18.1.3 Chapter Outline

This chapter is dedicated to the men and women who are pioneers in the effort of making clinical psychopharmacology, as practiced by clinical psychologists, a permanent aspect of the health service system in the United States. The chapter begins with a discussion regarding the basic competencies that these professionals must have in the assessment and the recog-nition of symptoms in their patients. The expertise required in the understanding of maintaining factors of the disorders is discussed next. Evidence-based practice in psychology and medicine is discussed in detail along with some of the underlying mechanisms that are operative in these validated treatment methods. A section on basic competencies and one on expert competencies follows. And, finally, a section describes the transition from basic to expert competency. Since the number of separate competencies that are expected of a medical psychologist are multitude, only primary aspects of these competencies could be discussed. In the years to come as the field of CPP expands and becomes more widely accepted, the competencies expected of its professionals will also grow in number, and priorities among these competencies will be established.

18.2 Recognition of Symptoms and Their Assessment

18.2.1 Diagnostic Competency

The process of diagnosis is often conceptualized as a "best estimate" or educated decision made on the basis of evidence (both subjective and objective), which is used to label a problem or a dysfunctional behavior, to offer advice about intervention methods. Symptoms or complaints are described by the patients and signs of psychopathology are observed by the clinician. If these signs and symptoms meet the criterion for a specific category of pathology listed in diagnostic classification manuals such as the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) or the International Classification of Disease (ICD-9), a clinician feels justified in applying that diagnostic label to the patient's problem.

However, there is a risk that such a "best estimate" may be given in error. Groopman (2007) cites a report in which 15% of all diagnoses made by physicians were in error. The impact of such diagnostic error may be long-lasting, because diagnoses are kept in medical records, and

used by future diagnosticians and insurance companies affecting how that person is perceived and treated the rest of his/her life.

Since the impact of diagnostic error may be a threat to a patient's future health, some authors have suggested that diagnosis is an ethical process (Brown & Freyd, 2008). It is of utmost importance that clinicians are trained to be competent in their diagnostic ability. And, it must be with great care and utmost caution that they apply their diagnostic labels.

18.2.2 Diagnostic Competency of a Medical Psychologist

For each type of mental disorder that a clinical psychologist encounters in the practice setting, there are both psychological and medical characteristics of that disorder that need assessment. For example, a patient with a complaint of depression needs to be assessed for the psychological symptoms of their depression (e.g., psychomotor retardation, insomnia, etc.), which may be assessed by interview or self-report scales. In addition to this psychological approach, a patient with depressive complaints needs to be assessed for those medical disorders that may be the cause of the depressive complaints (e.g., thyroid disorder, dementia, chronic pain, renal failure, etc.), which may be evaluated using laboratory tests and medical exams. Competency in both of these forms of assessment is part of the skill requirements for efficacious and safe clinical care.

18.2.3 Psychological Diagnostic Competency

Of all health professionals, it is the clinical psychologists who are trained to the highest level and who have the broadest range of competence in psychological diagnostics. Clinical psychology doctoral students take academic coursework in both structured and unstructured interviewing methods and receive practicum and internship supervision in the quality of their interviewing skills. Coursework in adult, adolescent, and child psychopathology gives them a basis for making diagnoses. Coursework in case conceptualization offers them guidance in treatment planning using evidence-based treatment research, evidence-based practice methods and clinical decision-making using a variety of theoretical orientations. Academic coursework, practice residency, and licensed experience prepare a clinical psychologist to make accurate diagnoses of their patient's psychopathologies using the diagnostic categories of DSM-IV (Diagnostic and Statistical Manual – 4th edition revised, 2000). In addition to the DSM-IV method of identifying the signs and symptoms of psychopathology, clinical psychologists have academic coursework and practice residency training in the use of psychometric assessment measures. They study the administration and interpretation of IQ tests, personality tests, and rating scales, which are used to gather detailed information about their patient's psychopathologies. Some clinical psychologists obtain specialized training in neuropsychological assessment, forensic assessment, assessment for addictions and pain, and other aspects of health psychology. These measurement tools assist them in making accurate and detailed analysis of patient psychological problems. The level of skill that they are able to demonstrate using these instruments and applying DSM-IV diagnoses is the basis for the national board exams in clinical psychology called the American Board of Professional Psychology (ABPP). Obtaining this ABPP diplomate in clinical psychology is an evidence-based method for demonstrating

the expert competency of a clinical psychologist in the area of psychological diagnostics and ethics. Basic competency of a clinical psychologist and diagnostician is certified by state licensing boards.

18.2.4 Medical Diagnostic Competency

On the other hand, clinical psychologists are not typically trained or licensed to diagnose medical problems. In fact, there has been a trend in clinical psychology programs to move away from biopsychology issues and fill the gap with courses on psychological topics. Only those specialized concentrations in neuropsychology and health psychology have continued to focus somewhat on coursework such as anatomy and physiology, neuroanatomy, neurophysiology, neuropathology, pathophysiology and psychopharmacology at the predoctoral level and residencies in these specializations at the internship and postdoctoral levels. Since these specializations do not include licensing to diagnose medical problems, most of these neuropsychologists and health psychologists refer to physicians for such diagnostic work.

The licensing of medical psychologists in New Mexico and Louisiana and the practice of medical psychology in the military has added a new demand that some psychologists be trained to recognize the symptoms of medical disease. To attain such a competency, training programs designed to educate medical psychologists have structured their academic curriculum and clinical practice to include coursework and clinical experiences in medical diagnostic work.

Master of Science programs in Clinical Psychopharmacology have been established at five universities in the United States: Nova Southeastern University, New Mexico State University, Fairleigh Dickenson University, Massachusetts School of Professional Psychology, and Alliant University. These programs offer a similar diagnostic curriculum in pathophysiology, laboratory testing, and physical assessment designed to prepare a medical psychologist for practicum training and licensing as a medical psychologist. Some of these programs do not require all course work to be done in the classroom and some do not require a practicum for graduation, but all offer similar academic curriculum.

As an example of the curriculum offered by most of these programs, the list of required diagnostic courses and credits for Nova Southeastern University are as follows:

- Review of Organic Chemistry and Biochemistry
- Anatomy and Physiology
- Neuroanatomy and Neuropathology
- Neurophysiology and Neurochemistry
- Pathophysiology
- Laboratory Testing
- Physical Assessment
- Practicum I

This curriculum provides clinical psychologists with an academic curriculum and clinical experience that prepares them to become competent in symptom recognition of medical problems. Nova Southeastern University requires a clinical practicum at the end of the academic coursework to acquire modeling and supervision in the application of their knowledge of psychopharmacology. Passing a capstone exam at the completion of academic course work

provides evidence of basic competency. Passing the PEP exam and being licensed in the state of New Mexico or Louisiana, or becoming a military medical psychologist provides the pathway to expert competency, which develops with practical experience as a medical psychologist. Graduates of advanced training in psychopharmacology who do not become prescribing psychologists, may, however, become expert consultants in psychopharmacology.

18.3 Maintenance Factors of the Disorder or Problem

18.3.1 Competency Related to Maintaining Factors

In addition to their expertise in diagnostic assessment, clinical psychologists and medical psychologists need to be competent in the estimation of maintaining factors in the psychopathology of their patients. Just as above it was shown that medical psychologists who prescribe and clinical psychologists who consult regarding psychopharmacological medications need to be competent in the twofold set of knowledge bases (psychological and medical) in the area of diagnostic assessment, so also these clinicians need to understand the combination of psychological and medical maintaining factors involved in the psychopathology of the patients to whom they prescribe psychopharmacological medications.

18.3.2 Competency in Psychological Maintaining Factors

Clinical psychologists need to be knowledgeable regarding the factors, which might tend to maintain the psychopathology of their patients, despite the accurate application of a treatment of choice. The rationale for this need is that psychological maintaining factors represent mechanisms that have been found to complicate and attenuate traditional intervention strategies (Rapee & Barlow, 2001). These researchers have offered a thorough description of the maintaining factors in generalized anxiety disorders, panic disorders, and phobias. Other authors have more recently presented research findings regarding maintaining factors in other disorders. For example, Voncken and Bogels (2006) found that interpretation and judgmental biases concerning negative evaluation maintained social phobia. Schmidt and Treasure (2006) found that perfectionism, avoidance, and pro-anorectic beliefs maintained anorexia nervosa. Appraisal of intrusions has been found to maintain OCD (O'Connor et al., 2005). Positive belief about eating and negative belief about weight and shape have been found to maintain bulimia nervosa (Cooper, Wells & Todd, 2004). Therefore, competent clinical and medical psychologists must take such maintaining factors into consideration when carrying out assessment, case conceptualization, treatment planning, intervention, and post-intervention follow-up. Research findings have indicated that these maintaining factors need to be the basis for modifications in the treatment plan and treatment process, to enhance the potential for therapeutic success (Hoffman, 2006).

18.3.3 Competency in Medical Maintaining Factors of Psychopathology

Mental disorders and the treatment of these disorders both occur within the context of psychological adjustment and bodily integrity. Brain and body integrity supports psychological

integrity. Diseases and injury to brain and body can be a cause or a maintaining factor of psychopathology. In their review of the characteristics of anxiety and panic and phobic disorders, Rapee and Barlow (2001) described the genetic, familial, neurological, and other biological factors that play an etiological or maintenance role in these disorders. Moras (2006) notes that neural networks are hypothesized to be the primary neurological maintaining factors of psychopathology. Pineles, Street and Koenen (2006) found that guilt and shame proneness were associated with somatization symptoms. A competent clinical or medical psychologist needs to be aware of this research literature on biological maintaining factors of psychopathology.

Depression is a good example of psychopathology that is often found to be secondary to neurological, medical, and surgical diseases, and medications. It is known that depression frequently accompanies degenerative diseases, such as Parkinson's, Huntington's, and Alzheimer disease, as well as focal brain diseases, such as stroke, brain tumor, brain trauma, and multiple sclerosis. Depression has been found to occur with corticosteroid excess or deficiency, hypothyroidism, Cushing's syndrome, Addison disease, hyperparathyroidism, Pernicious anemia, renal failure, myocardial infarction, open-heart surgery, brucellosis, viral hepatitis, infectious mononucleosis, cancer, and parturition. Medications such as analgesics, anti-inflammatories, amphetamines, antibiotics, anti-hypertensives, cardiac drugs, corticosteroids, disulfiram, L-Dopa, methysergide, oral contraceptives, and alcohol are all known to be associated with depression (Victor & Ropper, 2001). Clinical and medical psychologists, who serve patients with complaints of depression, need to be aware of these potential biological maintaining factors in these patients. These clinicians, also, need to know the potential biological maintaining factors that are associated with psychosis, anxiety, bipolar disorder, obsessive-compulsive disorder, and other mental disorders.

However, especially in medical settings, clinical and medical psychologists will be asked to consult regarding the psychological status of a patient with a given medical condition. In this case, where the medical disease is the presenting information for a referral, a competent clinician needs to be aware of the psychopathologies that have been found to most frequently occur when there is disease in a specific bodily system. Many of the diseases found in bodily systems are known to be accompanied by psychopathology and these diseases become the maintaining factors during the treatment process. In a study of the relationship between chronic somatic diseases and mental disorders, Härter et al. (2007) found prevalence rates of greater than 40% mental disorders in patients diagnosed with cancer, musculoskeletal, cardiovascular, and respiratory disorders.

Diseases of the Nervous System. Neurological disorders, especially those that are difficult to identify early, such as brain tumors, often have as their first sign or symptom a personality change. A slow-growing meningioma of the frontal lobes may only produce classic headache signs later in the disease process, whereas friends and relatives may notice deterioration in personality early in the disease process. Brain trauma, especially focalized lesion, is frequently the cause of personality change. In the classic case of Phineas Gage, the tamping rod is known to have damaged the orbital frontal lobe and changed the individual from a responsible crew manager into an individual with an irresponsible and impulsive personality. Temporal lobe seizures can be associated with a broad range of psychopathology including aggression, hallucinations, and delusions. Because one of the major symptoms of degenerative diseases such as Alzheimer Disease is memory loss, behaviors that reflect this memory loss may resemble psychotic hallucinations and delusions. Although, neuropsychologists may have the highest competency in

assessing such examples of brain–behavior relationships, every clinical psychologist who engages in diagnostic assessment must be aware of the possibility that the psychopathology, which they identify, may have a neurological etiology. Masters programs in clinical psychopharmacology are well designed to provide medical psychologists with adequate academic and practical experience in the identification of neurological causes of psychopathology.

The Endocrine System. Growth hormone deficiency may cause pathologies in both intelligence and personality. Dysfunction of adrenocorticotropic hormone may be related to under or over activity and the inability to handle stress. Diabetic hypoglycemia and hyperglycemia may be related to personality disorders. Laboratory tests of hormonal sufficiency must be a part of the initial intake of patients who complain about depression, anxiety, and suicidal behavior. Competence in identifying this link between hormonal dysfunction and psychopathology must be a part of the education of a medical psychologist.

With regard to the immune system, asthma is known to cause considerable stress in patients, and the stress in turn can aggravate asthma (Berger, 2000). Schmidt and Lerew (1998) in a prospective study of military personnel under stress found that premorbid factors such as anxiety and sensitivity were predictive of the development of physical disorders such as cardiovascular disease. Skeletal, muscular, integumentary, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems of the body have all been found to be associated with mental disorders or mental symptoms of physical disease.

Medical psychologists who practice as prescribers of medication, especially, need to be thoroughly familiar with all of these physical systems, the impact of medications on patients as well as the literature that reports their relationships to mental disorders. Masters programs in clinical psychopharmacology offer courses in anatomy, physiology, and pathophysiology that are designed to address these issues. Clinical psychologists, also, need to be aware of the possibility that these biological maintaining factors are operative in their patients with mental disorders.

18.4   Evidence-Based Treatment Approaches

A prescribing psychologist, who uses evidence-based practice (EBP), would consider diagnostic assessment and maintaining factors to be the first two components in a three part sequence leading to competent treatment planning. Evidence-based treatment (EBT) approaches are typically chosen from the research literature to fit the needs of the patient as delineated through assessment and estimation of maintaining factors. Therefore, competent treatment planning requires an expertise in assessment, maintaining factors, and EBT, as well as the sophistication in case conceptualization that will lead to the effective combination of these three components of treatment planning. Clinical psychology doctoral programs offer thorough training in the psychological treatment aspect of these steps, but may not offer in-depth training in the psychopharmacological treatment aspect. It is for this reason the postdoctoral masters programs in clinical psychopharmacology have recently been added to some clinical psychology programs.

18.4.1 Evidence-Based Psychological Treatment

Early efforts to provide informal guidelines for the application of EBT by clinical psychologists (Hersen & Ammerman, 1994; Nathan & Gorman, 1998) offered a treatment-of-choice or

prescriptive model, which presented disorder–treatment matches for the clinician to use in practice. In 1994, APA Division 12 began publishing the EBT articles in their new *Journal of Clinical Psychology*. In 2007, Stuart and Lilienfeld in a letter to the editor of the *American Psychologist* could state that "psychologists bear an *ethical obligation* to offer evidence-informed services" (p. 616) (italics added). Such rapid progress from early informal guidelines to ethical responsibility reflects, also, a growing burden of knowledge-base required for competency. Most recently specialized groups within psychology, such as biofeedback clinicians (Yucha & Montgomery, 2008), have chosen to provide relief for this burden by publishing a suggested set of procedures to help members of their societies to choose the most efficacious match between biofeedback procedures and disorders. Such a provision of EBT guidelines will become a part of most specialties in clinical psychology in the future. Medical psychologists are primarily clinical psychologists and benefit from the guidelines that are sensitive to the balance between their psychological functioning and their medical expertise.

18.4.2 Evidence-Based Medical Treatment

Medical Guidelines. As the medical model of the 1980s has given way to the biosocial model of the 1990s in the field of medicine, evidence-based medicine (EBM) has begun to conceptualize psychological treatment as an integral part of healthcare (Bruns, 2008). Such a small percentage of medical procedures have been proven to be effective, according to Bruns, that EBM has become the way to fill the void. Medical specialties have initiated the use of evidence-based guidelines (EBG), as EBM is yet to dominate medical practice. EBG are produced by a panel of experts who review the available treatments and make recommendations about their use. Much of the advice that is given in EBG is based not on research evidence but on the traditions of clinical experience that have been adopted from leaders in the field. A good example of EBG that is relevant to the patient population served by a clinical psychologist is the *American Psychiatric Association Practice Guidelines* (2004), which provide recommendations for assessment and treatment of the following disorders: Acute stress disorder and Post Traumatic Stress Disorder (PTSD), Alzheimer's Disease and other dementias, bipolar disorder, delirium, eating disorders, HIV/AIDS, major depressive disorder, obsessive-compulsive disorder, panic, schizophrenia, substance abuse, and suicidal behavior. American Psychiatric Association Practice Guidelines included the methodology and recommendations for the formulation of a treatment plan, specific clinical features that influence the treatment plan, epidemiology and natural history of each disorder, and a summary of the literature on evidence-based treatment studies, which provide a rationale for treatment of choice in both the areas of psychotherapy and psychopharmacology.

In order that they demonstrate basic competency, prescribing psychologists and clinical psychologists who offer consultation regarding psychopharmacology would need to be capable of evidence-based practice that is similar to the method proposed by these guidelines. In other words, a competent prescribing or consulting psychologist must have a working knowledge of the current evidence-based treatment research that would provide support for the psychological and medical assessment and treatment methodologies that are to be used to treat each new patient with a specific disorder. Competency of an evidence-based practitioner requires both a thorough knowledge of the research and thorough training in decision-making regarding the clinical characteristics of each new patient. In addition to the American Psychiatric Association

Practice Guidelines mentioned above, other guidelines may be found in the literature, which propose similar clinical recommendations based on evidence-based treatment research. Other examples of such guidelines are those published by the British Association of Psychopharmacology (Anderson et al., 2008).

Maintaining a Balance Between Psychological and Medical. Prescribing psychologists in clinical practice such as the military psychologists (Moore, 2008) have emphasized how important it is for them to use a balance of psychological treatment and psychotropic medications for their patients. Especially in the cases of PTSD, depression, and sleeping problems, they see their medical colleagues too quickly using only medications as a first line treatment. In addition, military psychologists have emphasized how important it is for them not to assume that unusual behaviors have a psychological etiology (Younger, 2007), especially in emergency room cases. A prescribing psychologist must be aware of the medical disorders that can precipitate behaviors that at first appear to be psychological in origin. Therefore, Masters of Science programs in clinical psychopharmacology offer instruction in pathophysiology and its relationship to psychological symptomatology.

Recent efforts to produce balanced protocols that combine psychotherapy and psychopharmacology (LeVine & Mantell, 2007; Sammons & Schmidt, 2001) have offered prescribing psychologists a method for maintaining equilibrium between the biological and psychological aspects of their service. Prescribing psychologists benefit from access to the research results of both evidence-based treatment for their psychotherapy and evidence-based medicine for their psychopharmacological treatment. However, there is an ever increasing volume of literature covering both of these research endeavors. Evidence-based practice using both sources of information, therefore, offers a challenge to those seeking to become competent providers. It is understandable that one of the frequent objections of the prescribing psychologist group is that psychologists have too much to learn already (Brown, 2003). In a review and analysis of the research on the combination of psychotherapy and pharmacotherapy for mood and anxiety disorders, Otto, Smits and Reese (2006) concluded that combined treatment should not be the first-line choice for the treatment of mood and anxiety disorders, except for bipolar disorder. Thus, a thorough knowledge of the literature may very well incline a prescribing psychologist to use only one treatment modality or none. After all, the authority to prescribe includes the authority to unprescribe and not to prescribe at all (Dunivin, 2003).

18.5 Mechanisms of Change Underlying the Interventions

18.5.1 What Are Mechanisms of Change?

Kazdin (2008) has aptly addressed the concerns of researchers and clinicians regarding the applicability of findings from psychotherapy research in the practice of clinical psychological treatment. He points out that the findings of evidence-based treatment studies may not easily be generalized to the treatment of individual patients. He recommends that researchers put more effort into the study of the mechanisms of change. He appropriately defines mechanisms as "processes that explain why therapy works or how it produces change" (p. 151). Although, as Kazdin points out, an EBT study may have verified that the specific treatment procedures were the overall causal agents in the change, certain aspects of the treatment may be more basic

change producers or more basic contributors to the change. And these underlying change producers or contributors to change are the mechanisms of change that further research must investigate. As research findings concerning the mechanisms of change appear in the literature, a competent prescribing psychologist must be an avid user of this literature, an understanding user of the concepts conveyed in that literature, and an expert clinician who is ready to modify therapeutic procedures to fit this research.

18.5.2 Psychological Mechanisms

Rather than the traditional nonspecific factors that are common to various types of treatment, Kazdin (2005) notes that the genuine mechanisms of change are those that are specific to a single psychological treatment outcome. Kazdin further points out that such factors need to show how the therapeutic process unfolds to affect the outcome of the treatment. Demonstrating such a process may take several waves of research per mechanism, as sequential studies approximate the steps in the process. For instance, in a randomized controlled trial in patients with schizophrenia it was found that cognitive behavioral therapy provided significant reductions in suicidal ideations. The next step in this line of research would be to further unveil the mechanisms through which this reduction was obtained (Bateman, Hansen, Turkington & Kingdon, 2007).

A recent example of research on the identification of mechanisms of change is found in the study by Forman, Herbert, Moitra, Yeomans and Geller (2007) who compared cognitive therapy (CT) and acceptance and commitment therapy (ACT) in a randomized controlled trial and found differences in the mechanisms of action for the two types of treatment procedures. In the CT group, the outcome was mediated by changes in observations and descriptions of self-behavior, whereas in the ACT group, avoidance, awareness, and acceptance were found to be mediators of change. Another example is a study by Hogarty, Greenwald and Eack (2006) who randomly assigned patients with schizophrenia to either cognitive enhancement therapy (CET) or enriched supportive therapy (EST) and found stress regulating effects of treatment to be the underlying mechanism that led to a positive outcome. These authors also noted that an improvement in processing speed appeared to be involved. For a clinical psychologist to be competent in the awareness of and the use of such underlying psychological mechanisms, a regular effort would need to be made to study current research findings in the literature.

18.5.3 Medical Mechanisms

Two types of change mechanisms dominate the literature with regard to the way in which medical interventions are applied: surgical and pharmaceutical. Each of these has a substantial literature to provide guidance for the manner in which the methods are to be applied and evidence for the effectiveness of the methods. It is assumed that a boarded surgeon has extensive training in the first method, and that boarded internists in endocrinology, cardiology, hematology, oncology, pulmonology, and other internal medicine specialties have extensive training in their specialties. Medical psychologists are not offered such surgical or internal medicine training, and, therefore, must be trained to refer to such specialists when they encounter diseases that require such specialized training.

18.5.4 Psychopharmacological Mechanisms

Psychopharmacology is a subspecialty of pharmacology. The mechanisms underlying the treatment modalities of psychopharmacology are chemical in their composition, but neurological in their internal effects and psychological in their intended final impact. Psychopharmacological medications are designed to modify the brain mechanisms that lead to abnormal behavior and abnormal emotion. In other words, they have the same purpose as does psychotherapy and behavior therapy. It is assumed that both modalities of treatment (psychological and psychopharmacological) share some of the same underlying brain mechanisms (Etkin, Pittenger, Polan and Kandel, 2005). Some studies have found that psychological treatment methods can be used to improve neurological disorders. For example, Lundgren, Dahl and Hayes (2008) found that psychological treatment reduced the frequency of epileptic seizures compared with placebo controls.

18.5.5 Neurological Mechanisms

A new era of understanding of the mechanisms underlying the combination of psychotherapy and psychopharmacology began with the study of the NMDA receptor in the context of psychological treatment (Barlow, 2008; Kazdin, 2008). Barlow considers the discovery of these mechanisms to be one of the three most significant advances in the field of psychology that proclaim "a new era of competency and quality in professional psychology" (Barlow, p. 8). Mechanisms of change using a combination of psychological treatment and psychopharmacological treatment have been demonstrated for three disorders: social anxiety disorder (Hoffman et al., 2006), acrophobia (Ressler et al., 2004), and obsessive-compulsive disorder (Rothbaum, 2008; Wilhelm et al., 2008). In all the three disorders, the mechanism of change identified has been the glutamatergic NMDA receptor, which is stimulated by behavior therapy and enhanced by doses of D-cycloserine (Cycloserine, seromycin), which is a glutamate antagonist that had been previously marketed as an antibiotic owing to its competition with the amino acid D-alanine. The reason for excitement about these discoveries is that they have not only uncovered the basic chemical–neurological mechanisms underlying psychotherapy and psychopharmacology interventions, but that these discoveries offer knowledge to psychology and medical practitioners that will be beneficial to their patients. These discoveries make it obvious where the future field of clinical psychology is headed, and what challenges are there for the competent clinician.

In addition to these findings of mechanisms at the molecular level, research also continues to advance using radiology to identify neurological mechanisms at the level of anatomical and body tissue. In a study of the brain mechanisms underlying the effects of psychotherapy, Schienle, Schafer, Hermann, Rohrmann and Vaitl (2007) used fMRI to investigate changes in brain activation during cognitive behavior therapy for spider phobia. Principle brain activation changes were found in the orbital frontal gyrus, which is known to be a center for emotional regulation. The long-term benefit of this mechanism might be its use as an outcome measure in future research and practice. In a comparative study of the neurotransmitter mechanisms underlying the use of electro convulsive therapy (ECT), sleep deprivation (SD), and fluoxetine (FL), Conti et al. (2007) found that ECT and SD elicited fast-onset, short-lived responses in the catecholaminergic system of the locus coeruleus and hippocampus and FL elicited slow-onset

responses in the serotonergic system of the raphe and hypothalamus. Practitioners may be aided in the selection of therapy based on these findings.

18.6   Basic Competence of the Clinician

18.6.1 Professional Competency

Clinical competency of a prescribing or consulting licensed psychologist who has advanced training in clinical psychopharmacology refers to the extent and depth of knowledge and skills possessed by that professional. It is the extent of knowledge and skills which qualify a prescribing psychologist to accept patient referrals who have a broad range of psychopathologies, to diagnose their problems accurately, and to prescribe appropriate psychological or pharmacological treatment for these problems. Competency is an attribute that is most often conceptualized as a general trait possessed by those professionals who are well respected for their clinical knowledge and skills. However, competencies can be operationalized into specific subtypes of knowledge and skills. It is these operationalized competencies that allow us to judge who is competent at what, and to formulate methods by which competency may be attained.

18.6.2 Training to Be a Competent Clinical Psychologist

Psychologists who are licensed to prescribe psychopharmacological medication or who are trained to consult in clinical psychopharmacology are primarily clinical psychologists. Traditionally, they have academic training at the undergraduate level in experimental psychology, academic training at the graduate school level in an APA approved doctoral program in clinical psychology that includes four semesters of clinical practicum supervision and 1 year of an APA approved internship in clinical psychology practice, and a postdoctoral residency in clinical psychology practice. Their licensing examination administered by a state licensing board assures basic competence to practice clinical psychology. Some specialties in clinical psychology require a second year of postdoctoral residency, such as clinical neuropsychology. Therefore, depending on the level of credentialing, a prescribing or consulting clinical psychologist may be assumed to have at least basic competence (or higher for diplomats) in clinical psychology.

18.6.3 Specific Skills of Basic Competence in Clinical Psychology

Research. The first and most basic skill acquired in doctoral programs in professional psychology is the ability to design and carry out research in the social sciences to appropriately do a master's thesis and doctoral dissertation. Some psychologists will use this knowledge to go on as a researcher or professor, and others to use it to properly become a wise consumer of research as a practitioner, health, or forensic psychologist. Every clinical psychologist will learn to search the literature for the latest advances in evidence-based assessment and treatment, maintaining factors in treatment, and mechanisms of outcome to appropriately engage in clinical practice, consultation, supervision, and program evaluation. Competency in written composition, which fits the special mode of scientific writing, is a skill that is learned by researchers.

Assessment. A skill that is needed for competency as a licensed psychologist is that of psychological assessment and interviewing. After academic courses in test construction and psychometric theory, psychologists learn to administer, interpret, and write reports regarding specific tests of intelligence, personality, behavior, attitudes, career preferences, and therapy outcome evaluation techniques. Some psychologists will seek special assessment training in neuropsychology, forensic work or health psychology. Most psychologists are trained to engage in evidence-based assessment through the use and construction of reliable and valid measurement instruments. They take coursework in case conceptualization that is frequently based on their assessment and interviewing skills. They are trained to recognize the signs and symptoms of psychopathology and their maintaining factors to prepare them for accurate treatment planning. Competence in written composition is focused on the ability to report the interpretation of assessment findings in such a way that they can be understood and digested by other professionals such as physicians, lawyers, teachers, judges, and nurses.

Treatment. A third area of expertise that is part of the learning of a clinical psychologist is that of treatment of psychological disorders. After initial coursework in the research literature regarding evidence-based psychological treatment, and in regard to the various available treatment procedures, psychologists learn how to apply case conceptualization to treatment planning. Traditionally, doctoral students are supervised by experienced clinicians for 2 or more years of clinical practicum. These supervisors guide doctoral students through their first assessments and treatment casework to prepare them for their predoctoral year of supervised clinical internship. This intensive clinical supervision of casework is designed to help students to learn to conceptualize their cases properly, to engage in careful treatment planning, to be vigilant of the underlying mechanisms of their evidence-based practice procedures, and to consistently evaluate the progress and outcome of their treatment. The goal of this training is to reach competency as a therapist in the conceptualization, planning, execution, and evaluation of their treatment and management of cases.

Consultation and Supervision. A fourth area of knowledge and skill that some psychologists are offered in graduate school is consultation and supervision with other professionals such as physicians, lawyers, legislators, social workers, nurses, police, and teachers. They are taught how to refer to other professionals for consultation and how to give consultation and supervision when requested by other professionals. Some psychologists will pursue a double career, such as a psycholigist–lawyer to become an expert consultant in legal aspects of psychology. Other psychologists may become competent in several specialties in psychology sequentially as they move from being practitioners, to then become teachers, then supervisors, consultants, and managers. Competency at one type of professional skill may build on the competency obtained at another, in such a way that the professional is practicing several of these specialties in a combined fashion. For instance, many health psychologists involve their students in apprenticeship type of supervision as they make bedside rounds with their patients in the hospital or have students engaged as co-therapists in group therapy sessions with their patients.

Ethics, Diversity, and Cross-Cultural Sensitivity. A fifth area of competence expected of a professional psychologist is the ability to apply ethical standards of conduct to clinical practice and to appreciate the diversity and cross-cultural values of their patients. It is expected that professionals will not only behave in an ethical manner, but adapt their behavior to fit the needs of the specific cultural values of their patients. A competent clinician will be aware of the cultural background of each patient and make special effort to use only assessments normed in that culture. A competent clinician will either learn the special cultural needs of their patients

for intervention, or will find a therapist who is more capable of providing such service. Ethnic and cultural backgrounds of both the client and the psychologist not only impact the choice of psychotherapy, but may also guide the medical psychologist in pharmacotherapeutic treatment selection, taking into account the genetic variations of the client and the culturally-influenced perceptions of medication taking for mental illness, just as they would consider specific psychotherapeutic treatment modalities that have been established as efficacious (Rey, 2006a).

It is assumed that a prescribing or consulting psychologist with advanced training in clinical psychopharmacology will have all five of these basic competencies to carry out the complex task of combining the practice of clinical psychopharmacology with that of clinical psychology.

18.6.4 Competence as a Psychopharmacologist

What a Competent Psychologist Brings to Psychopharmacology. Prescribing or consulting medical psychologists who have been thoroughly trained in a program specializing in clinical psychopharmacology will have been previously trained to basic competency in clinical psychology as described above. They bring with them knowledge of psychopathology and the recognition of symptoms and signs of mental illness that will help them to make choices of medications. They bring with them research skills that will help them to become consumers of the research findings in evidence-based medicine. They bring with them knowledge of evidence-based treatment findings that will help them to combine medication and psychotherapy properly. They bring with them an understanding of the psychological needs of mental patients that will keep them from writing prescriptions too hastily, before psychological needs are met or at least assessed.

What Psychopharmacology Training Adds. Most psychologists have taken coursework in chemistry and neuroscience, but are in need of update and review of organic and biochemistry, neuroanatomy, neuropathology, neurophysiology and neurochemistry, anatomy, and physiology before they begin to study general pharmacology, pathophysiology, and clinical psychopharmacology. Training in administration and interpretation of a physical exam and laboratory tests are needed before beginning practicum training and supervision in clinical psychopharmacology. This supplemental training in the practice of psychopharmacology adds another dimension of competence to the training in clinical psychology. On graduation from a master's program in clinical psychopharmacology (or equivalent program), a clinical psychologist is ready to take the Psychopharmacology Exam for Psychologists (PEP), a national exam, and seek licensing in New Mexico or Louisiana, or to practice in the military as a prescribing or consulting psychologist. Such is the route to basic competency in clinical psychopharmacology. There is an opinion that a year of supervised residency should precede independent practice, and currently that is the policy of the United States military branches for prescribing psychologists.

Specific Competencies. The seven primary skills expected of a clinical psychologist who has basic competency in clinical psychopharmacology and who will be examined for these competencies on the PEP exam are the following: (see Appendix for details).

1. *Neuroscience*. For clinicians to understand the brain tissues in which psychopharmacological medications have their effects, they need to have a thorough knowledge of neuroanatomical structures and functions.

2. *Neuropathology*. For them to understand the interaction between neuropathology and psychopathology, clinicians need to have a thorough knowledge of neurological disorders.
3. *Pharmacology*. For them to understand the interaction between medications for other diseases and those for mental disorders, clinicians need to have a thorough knowledge of general pharmacology principles and medications.
4. *Psychopharmacology*. For them to be capable of properly selecting and prescribing appropriate medications for their patients, clinicians need to have a thorough knowledge of psychopharmacology principles and medications.
5. *Anatomy, Physiology, Pathophysiology*. For the clinicians to understand the anatomical basis for disease and understand the relationship between disease and mental disorder, they need to have knowledge of normal anatomy, physiology, and pathophysiology.
6. *Physical Assessment, Laboratory Exams and Differential Diagnosis*. Clinicians also need to be trained in how to assess pathophysiology through the use of a physical exam, how to interpret the results of laboratory tests, and how to arrive at a differential diagnosis of disease.
7. *Special Issues in Pharmacotherapeutics.* Clinicians must know psychotherapy–pharmacotherpy interaction, computer-based practice aids, pharmacoepidemiology, and professional, ethical, legal, and interprofessional issues.

18.6.5 Psychopharmacology Examination for Psychologists

The PEP exam was framed by the American Psychological Association (APA) to provide state licensing boards with a measure of basic competency as prescribing psychologists. It was designed to set credentialing standards for psychologists who had completed a postdoctoral degree in psychopharmacology. If an examinee passes this exam, there is some assurance that the individual has sufficient knowledge-based competence to prescribe psychotropic medications (Bricklin & Ciuccio, 2003, p. 180). The exam contains questions in ten knowledge-based areas: neuroscience; neuropathology; anatomy–physiology and pathophysiology; pharmacology; clinical psychopharmacology; research; differential diagnosis; professional, legal, ethical, and interprofessional issues; biopsychosocial and pharmacologic assessment and monitoring; and integrating clinical psychopharmacology with the practice of psychology.

The PEP exam is a computer-based instrument that has security built into the system. The requirements that have been established for admission to the PEP are the following: (Bricklin & Ciuccio, 2003, p. 186).

- A psychology doctoral degree.
- A provider of health service in psychology.
- A license to practice psychology on an independent basis that is currently in good standing.
- A postdoctoral program of education in psychopharmacology successfully completed. This postdoctoral program must be organized as intensive didactic instruction, offered by a regionally accredited institution of higher learning, an APA approved sponsor of continuing education, or a setting approved to provide continuing education by a state or provincial psychology licensing board.

A psychologist who has passed the PEP exam is ready to apply to a state licensing board, such as those in New Mexico or Louisiana, to be credentialed for prescribing medication. In addition to an academic program in clinical psychopharmacology and the passing of the PEP exam,

licensing boards also require supervised practicum in clinical psychopharmacology before certifying the basic competence to prescribe. Once such a supervised practicum, clerkship, or residency has been completed, basic competence may be certified for independent practice as a prescribing clinical psychologist.

18.6.6 Measures of Competency

For a licensed psychologist, the currently accepted measures of basic competence are a doctoral degree in professional psychology, a clinical psychology internship, a postdoctoral residency, and a passing score on the state licensing exam leading to the awarding of a state license to practice clinical psychology. For a prescribing psychologist, the criteria are a state license to practice clinical psychology, a postdoctoral masters degree (or equivalent) in clinical psychopharmacology, an intensive practicum or externship in the practice of clinical psychopharmacology, a passing score on the PEP exam, and a state license to practice psychopharmacology (or certification within the military or Guam). The complexity of these multiple criteria which combine certifications in both clinical psychology and clinical psychopharmacology make it somewhat difficult to define the competency of a prescribing psychologist. In a sense, however, it is somewhat analogous to the long and arduous route taken by a student in a highly specialized medical specialty such as endocrinology.

18.7 Expert Competencies of the Clinician

18.7.1 Expert Competency for Psychologists

Basic competency is typically certified at the beginning of one's career by a licensing board after a licensed clinical psychologist has obtained a Masters of Science in clinical psychopharmacology (or its equivalent) and has passed a national exam (such as the PEP exam). A clinical, counseling, cognitive-behavioral, family, forensic, group, school, rehabilitation, child and adolescent, health, psychoanalytic, or organizational psychologist as well as a clinical neuropsychologist has the opportunity to apply for specialty certification by the American Board of Professional Psychology by passing a board exam, and being awarded diplomate status. The ABPP exam can be taken only after training and postdoctoral experience in clinical practice. The ABPP diplomate affords psychologists the opportunity to proceed to a higher level of credentialing than the basic competence credentialing of the state licensing board. Those who have passed this boarding and received a diplomate (ABPP) have a level of competence that some consider qualifying them to have expert competence in their specialty. However, the field of clinical psychopharmacology is so new, that there has been no opportunity, thus far, to create such a national board. Therefore, other criteria need to be used to define expert competency in this new discipline within professional psychology.

The expert level of competency for a psychologist with postdoctoral training in clinical psychopharmacology is typically an advanced stage of progress in the career of such a professional. Experts have typically spent a number of years in successful private or institutional clinical practice, or teaching in a graduate program in clinical psychopharmacology, or experience mentoring and supervising the training of new candidates for a career in medical

psychology. Often experts have been recognized by their professional colleagues and societies by election to office, invitations to present workshops, and the presentation of awards for excellence. In other words, expert competency is something that is publicly acknowledged by ones colleagues, students, employers or fellow professionals. Although such recognition is not usually given in the form of certificates or diplomas, it can often be documented in the form of published manuscripts, presentations, workshops, elected offices held, letters of recommendation, or years of clinical practice, teaching, supervision, and consultation.

18.7.2 Specific Competencies of an Expert

Although expert competency may be somewhat difficult to define as a general trait, specific competencies of an expert are more easily defined, because they are measureable. The following are some of the specific competencies one would expect to find in an expert prescribing psychologist or one consulting in psychopharmacological medications:

1. *Expert Literacy*. Literary experts have a familiarity with published research and opinion, so comprehensive, that they are well versed and understand the limitations and insufficiencies of that literature better than their colleagues. An expert knows not only what has been well verified by research findings, but what has not yet been researched well, what is not yet known and what are the limitations about the research findings that have been published. To have expert competency in the current literature, an expert stays informed about what has been accomplished in the past, what is currently being researched, and what yet needs to be done in the future. Such a historical perspective on the literature in a specific science allows the expert to be comfortable answering any question or issue that might be brought up in public forum. Such a grasp of the literature would give a prescribing psychologist specific expert competency as a consultant, teacher, and practitioner. For a prescribing psychologist such expert competency will in the future be measurable in an oral board exam.

2. *Expert Ability in Diagnostics*. An expert is not bound by any diagnostic theoretical orientation, but is familiar with and is able to combine and use behavioral, dynamic, humanistic, and medical approaches to diagnostics equally well and in combination with each other. Such an eclectic orientation allows the expert to be more sensitive to the personal needs of patients and less concerned about fitting diagnostic impressions into theoretical categories. An expert is sensitive to the signs and symptoms of psychopathology in a way that allows conceptualization of the case to be built gradually from the most objective aspects of information. Although an expert begins to formulate diagnostic hypotheses with each complaint and observed behavior, no conclusions are reached until the confirmation and disconfirmation process is completed, because the expert is flexible and open to consider many possible solutions to a problem. For a prescribing psychologist, expertise involves a combination of skills in pathophysiology and psychopathology, to discriminate and integrate problems that bridge the medical and psychological areas, especially in health psychology.

3. *Expert Therapist*. As an expert in both evidence-based psychological treatment and evidence-based medicine, the prescribing psychologist would demonstrate expert competency in the application of evidence-based practice by appropriately combining psychotherapy and pharmacotherapy in treatment planning. Patients who depend on the expert

prescribing psychologist for clinical care could expect efficient, effective interventions that would lead to successful outcome of their problems. They could expect that their clinician would not only use treatments of choice that had the best research support, but that there would be modifications of their treatment that would fit their problems on a day-to-day basis. They could anticipate help with relapse prevention and long-term monitoring in years of follow-up evaluations.

4. *Expert Researcher*. Prescribing psychologists with expert competency would contribute to the knowledge in their field through their own data collection, analysis, interpretation, and written manuscripts. An example of such research by a practicing clinician is described in an article (Schwartz, 2008) regarding a military prescribing psychologist who, during a tour of duty both treated thousands of service members and Iraqi citizens and collected data on 6,000 active duty troops on the topics of Post Traumatic Stress Disorder and traumatic brain injury.

5. *Expert Consultant*. A prescribing or consulting psychologist, who has a reputation as an expert consultant, is one who is frequently sought out by clinicians and researchers to give advice about clinical problems. Not only do fellow psychologists seek to consult with experts, but also, physicians, lawyers, judges, nurses, physician's assistants, social workers, police, parole officers, teachers, coaches, and government leaders seek advice from them.

6. *Expert Supervisor*. Students seek out expert supervisors on the basis of their reputation as someone whose clinical direction leads neophytes to successful outcomes. Experts provide ideal models for students who are searching for someone to imitate, someone who will be a role model for them to follow, and someone who may be a long-term mentor for them. A prescribing psychologist with expert competency as a supervisor has a wealth of clinical experience to pass on to the next generation of psychologists and enjoys the role of counselor and guide.

7. *Expert Teacher*. Doctoral and postdoctoral schools in clinical psychopharmacology search for experts who will be able to provide educational leadership in their training and teaching programs. Prescribing psychologists who have expert competency as a teacher, typically, combine many of the expert competencies listed above, expert literacy, expert diagnostician, expert therapist, expert researcher, consultant, and supervisor. By the time they have been employed as expert teachers they have already spent many years in practice and consultation as well as advancing their own individual competency. Therefore, prescribing psychologists with expert competency as teachers come to the classroom with a depth of real-life experience that is appreciated by their students. They are more interesting as lecturers, more engaging as story-tellers, more vivid in their examples, and more believable as teachers of facts, than are teachers who have acquired knowledge only through book-reading.

18.7.3 Measures of Competency

Although the following criteria do not have the support of research, they are often used as informal measures of competency. They provide a method of rating the level of competency expressed in the performance of professional behavior. When deficiencies are found in these ratings of competency, the fault may be due to inadequate education and training at the academic level, inadequate mentoring at the practicum and residency level, inadequate maintenance of that training at the continuing education level, or inadequate motivation to

provide an optimal level of service to patients. If a measure of competency indicates that competency is lacking, remedial steps may then be taken to rehabilitate or enhance the knowledge and skills of the professional to regain or attain competency.

Efficacy as a Measure of Competency. Competent professionals use the most efficacious methods of treatment, and efficacious treatments are the ones most often chosen by competent professionals. The relationship between competence of the professional and efficacy of the treatments that they use may be employed as one way to measure the level of competency. How knowledgeable is the professional about the efficacy of the choices of treatments available? A prescribing psychologist who is learning how to choose efficacious treatments may be basically competent, whereas another prescribing psychologist who keeps apace with the research literature regarding this efficacy well enough to consistently choose efficacious treatments may be of expert competency. Therefore, the frequency with which a professional uses the treatment of choice that is currently available could be used to rate that person's basic versus expert competency. Such a frequency of use of treatment of choice would most likely be related to the professional's own success rate with patient cases (another measure of competency).

Credentialing as a Measure of Competency. Competence to practice is often discussed in the context of past educational or training experiences that may be used to verify a basic level of knowledge or professional activity. Such experiences are certified by professionals who function as clinical supervisors, professors, training directors, and program administrators. Credentialing certificates, transcripts, letters of recommendation, and other methods of verification are sought by licensing boards, hospitals, clinics, and practice settings where professionals seek employment or the right to practice (Rozensky, 2007). Credentialing usually includes evidence of competency to perform specific techniques (e.g., orthopedic surgery, radiology, neuropsychological assessment, clinical psychopharmacology, family therapy, etc.), and may also include the competency to serve specialized populations of patients (e.g., pediatrics, geriatrics, etc.) and specialized disorders (e.g., cancer, heart disease, psychosis, PTSD, etc.).

The rationale for credentialing on the part of institutions is that professionals who practice outside their scope of competency place the institution at considerable risk for malpractice litigation. Professionals who are insufficiently trained in specific techniques, populations, and disorders risk potential harm to patients and to the reputation of the institution, when they inappropriately expand their scope of practice. For instance, psychologists who have inadequate training in clinical psychopharmacology should avoid the role of consultation with medical professionals regarding prescription medications for psychological disorders. And physicians who have inadequate training in clinical psychology should avoid the role of prescribing psychopharmacological medications to patients with psychological disorders.

Credentialing for prescribing psychologists has currently developed as a sequence of three steps to certification:

1. The doctoral degree in psychology and licensure to provide mental health services
2. A postdoctoral master's degree in clinical psychopharmacology or an equivalent educational certification and an externship in supervised clinical practice in clinical psychopharmacology
3. A passing score on the PEP exam leading to state licensure in New Mexico or Louisiana, or military certification to practice clinical psychopharmacology

Informal credentialing as a consultative clinical psychopharmacologist has developed around the completion of the first two steps above, although no credentialing body has as yet attempted

to delineate formal credentialing requirements for consultation by psychologists who have had special training in clinical psychopharmacology.

Safety of Patients as a Measure of Competency. For a prescribing psychologist, safety refers to the lack of medical error in the clinical practice of a professional. In the states of New Mexico and Louisiana, where psychologists may apply for licensing as an independent practitioner, medical psychologists trained in clinical psychopharmacology have been approved to prescribe medication for patients with psychopathology. Their competence has been verified by thousands of prescriptions that they have written without a single negative event. Such a high level of performance by these medical psychologists has provided good evidence for the safety and effectiveness of their prescribing. The combination of basic competence and a clean safety record makes a prescribing psychologist a very desirable service provider. The frequency of medical errors may be used as a measure of competency. Experts most often function without any of the types of error that would be harmful to patients.

Networking as a Measure of Competency. Experts tend to maintain large networks of communication with their colleagues. They attend and give workshops, attend and present at conferences, serve on national committees, and serve other leadership roles in the national societies of their colleagues. Consequently, they maintain regular communication with their colleagues to plan and organize committee work and programs, but also to stay abreast of the latest research findings and techniques developed by these colleagues. For a prescribing or consulting psychologist who has advanced training in clinical psychopharmacology, the volume of this networking is traditionally documented in a curriculum vita. Such a summary of this networking can be used as a measure of expert competency.

A combination of these measures may be used to judge the level of competency of a prescribing and consultative psychologist. Those with expert competency are usually more efficacious and credentialed, are safe in their practices, and do more networking than their colleagues. Therefore, a prescribing psychologist with expert competency would tend to have an excellent record on all of these informal measures.

18.7.4 Ethical and Cultural Competence

Competency in one aspect of clinical practice does not make a clinician competent to treat or assess other disorders or patients from other cultures. A good example of the necessity for a therapist to be competent to treat a specific individual is the case of a patient from another culture who is diagnosed with PTSD. Zayfert (2008) observes that the re-experiencing and arousal symptoms of PTSD are most likely a response to trauma that is common across various cultures. However, the expressions of that response may be quite specific to different cultures. Therefore, a therapist of a culture different from that of a patient would not be competent to assess or treat that individual, if that therapist was not familiar with the specific expressions of a PTSD response found in that patient's culture. The therapist might use the correct evidence-based treatment procedures in a competent manner but yet be incompetent to treat this specific case owing to the lack of understanding the specific type of expressions of PTSD expected from this patient. For a prescribing psychologist, the competency issue might be even more complex, since the specific cultural response to a treatment medication would also need to be known.

18.8 Transition from Basic Competence to Expert

18.8.1 Forces That Drive the Transition

The goal of the transition from basic to expert competence is to convert knowledge and skills that qualify as basic competence to knowledge and skills that qualify as expert competence. For example, the basic competence of the psychopharmacologist in the assessment and recognition of symptoms must be converted to expert sensitivity to signs and symptoms of disorders and superior discrimination of diagnostic categories of pathology. The steep developmental trajectory of such a transition requires a significant effort to excel, a great deal of experience from which to learn, and exceptionally high-quality educational input to drive the transition. A professional with basic competence would need the beneficial input of a broad range of patient pathologies from which experience is gained, a broad range of assessment techniques from which normative and abnormal types of behavior are learned, astute teachers, supervisors, and consultants from whom the steps to excellence are learned, and personal reading habits that cover the literature on assessment are developed.

Basic competence is gradually transformed into expert competence by enhancing experiences and enriched learning. Licensed psychologists who have completed postdoctoral training in clinical psychopharmacology (CPP) have reported that they are aware that their own clinical practice skills have improved, that the number of patient referrals have increased, and that they have more requests for clinical consultation. Such an outcome suggests that they have made personal progress in clinical competency. The intensive study of CPP by a clinical psychologist represents an increased focus or concentration in one's career that leads to enhancement of knowledge and skills. This enhancement in competency is most likely driven by the similarity in goals and outcome of the two clinical disciplines, which make them complementary to each other. For a clinical psychologist, the addition of CPP skills in the recognition of medical signs and symptoms of disease is complementary to the psychologists own skills in the recognition of symptoms of psychopathology. And the resulting enhancement in both psychological and medical skills improves a psychologist's ability to distinguish between medical and psychological disorders. Such an expansion of knowledge and skills impels the transition from basic to expert competency. A similar transition occurs with regard to the mechanisms underlying the treatment of mental disorders as Barlow (2008) has indicated. A clinical psychologist who does postdoctoral training in CPP studies the chemical mechanisms underlying the use of psychotropic medication and learns the theoretical bases for the efficacy of psychopharmacological treatment. The study of these scientific advances in evidence-based medicine enhance a psychologists own professional knowledge of evidence-based psychological treatment and, therefore, also, enhance the opportunity for progress toward expert competency. The study of medical maintaining factors of psychopathology by a psychologist in advance training in CPP is yet another avenue of competency enhancement.

Basic competence in treatment is often converted to expert competence, when, after many years of successful treatment experience, a practitioner becomes a teacher and supervisor of graduate students in clinical psychopharmacology who are learning to be treatment providers. This type of driving force for the transition from basic to expert competence is especially powerful when the professor and supervisor continues simultaneously to be a practitioner and uses the patient contacts as an occasion for apprenticeship for students. Often, a highly motivated and alert teacher and supervisor learn from the students as the students are learning from the supervisor.

The driving forces of the transition from basic to expert competence are, therefore, both personal and social, both learned and taught, dependent on both motivation and effort, and driven by both environmental contingencies and vicarious reinforcement. Those in the midst of the transition are personalities who are satisfied with gradual successive approximation to the goal of expert competency. By exposing themselves to the shaping forces of education, modeling, rewarding experiences, and social enjoyment of collegiality with fellow professionals, a psychopharmacologist may make rapid progress toward expert competence.

18.8.2 Form of the Transition

The transition from basic to expert competency as a prescribing or consultative psychologist may involve many years of experience or may be accomplished rather rapidly with some individuals. The transition may not be an all-or-none phenomenon. Transitions may occur in individual subtypes of competencies at different times in the individual's career. An experimental psychologist, for example, may spend many years obtaining expert experience as a researcher, grant writer, and teacher. At some point in such a career, the experimental psychologist may decide to return to school to take academic coursework in clinical psychology and become certified as a practitioner with basic competence as a clinical psychologist. With time such a person might progress to expert competencies in both experimental and clinical psychology. Currently, this type of transition, almost always occurs with professional psychologists, who wish to obtain basic competence in clinical psychopharmacology. In fact, the administrative council of the American Psychological Association has voted to require that psychologists obtain basic competence first as licensed psychologists before they are even allowed to begin their study to obtain basic competence in clinical psychopharmacology. However, most transitions from basic to expert competence or from one subtype of competency to another are not legislated, but rather occur as a result of personal effort to learn or a special talent in a focused area of knowledge or skill.

18.8.3 Identifying Competent Psychologists

Although each professional who actually reaches the expert level of competence may differ, some common behaviors of these individuals can be described:

1. *Experts Seize the Opportunity to Learn*. Prescribing psychologists with expert competency regard the structured education that they have obtained as a step toward learning on their own. They develop an awareness of their capacity to learn without the structure of the classroom and curriculum of graduate school. Through the development of successful study habits, they gain a sense of their own learning ability. They feel capable of self-learning and capable of teaching themselves. Although they seek out learning experiences in workshops and classes taught by others, they view themselves more as active learners who do not wait for learning to appear, but who continue to seek out the information that is needed to take the next step in moving toward expert competency.
2. *Experts Cultivate a Dynamic Style of Learning*. Instead of viewing the content of learned facts as material written in stone, these individuals begin to realize how fluid human

knowledge really is. Through the shifts of historical knowledge of the paradigm that have occurred in science, they begin to understand that knowledge is an ever growing phenomenon. They memorize facts, but still realize that they are open to change. Gradually, they understand that learning itself is the prized possession that they have acquired in graduate school and not the content of the facts that they have memorized. Competency is no longer viewed as the storage of a body of facts, but rather it is the capacity to keep learning and stay abreast with science.

3. *Experts Adopt a Competitive-Sharing Attitude*. Instead of working in isolation from colleagues, the learners who are on their way to expert competence are willing to share thoughts, ideas, plans, writings, and new insights with colleagues and students, while at the same time, maintaining a healthy, competitive stance. These professionals on their way to expert competency enjoy the collegiality of working with other professionals, and are aware that they themselves make more rapid progress in their own learning when they collaborate with others. They build their own personal skills through behaviors such as co-therapy, co-authorship, team-teaching, interdisciplinary discussions, and collaborative grant writing. They enjoy passing on their own knowledge and skills to the next generation of students, and develop a reputation for friendliness, congeniality, and cooperation. They also enjoy competing for grant funding, competing for awards, and competing for journal space for their manuscripts. This combination of a competitive-sharing relationship with their colleagues earns them respect and admiration as competent experts.

4. *Experts Are Persistent in the Development of Their Expertise*. The transition from basic to expert competence has been documented frequently in the lives of famous psychologists such as B.F. Skinner, Albert Ellis, Albert Bandura, Ralph Reitan, and David Barlow, who have become known for their expert competence as psychologists. A common factor in the pathway to expert competence of each of these famous psychologists was the highly focused specialization of knowledge and skills that was pursued by each of them. Each of them carved out a narrow and highly concentrated area of work in the field of psychology, to which they tenaciously devoted all of their time and efforts. Such a lifelong devotion to a single purpose is clearly a successful method to progress toward expert competency. Underlying such a focused career was the personal trait of perseverance that appears to be part of the personality of a successful expert. Steadfast persistence was needed to make a single focus on the heart and core of a life career. These famous psychologists did not become famous overnight. But they were willing to push forward even when the tasks became difficult and frustrating. Therefore, one of the principal factors in the transition from basic to expert competence is the persistence effort to maintain a focused career.

5. *Experts Choose an Area of Specialization*. Psychologists with expert competency do not try to know and do everything that is possible within their profession. Instead they choose an area of specialization that blends the highest priority as set by their profession and their own personal goals. Because they have deliberately prioritized their focus of learning and competence, they are very aware of their areas of expertise and their limitations. They admit to patients and colleagues those areas of knowledge and skill that they do not have. They readily refer to their colleagues and to other professionals. An example of such prioritizing is a child clinical psychologist, who has advanced training in clinical psychopharmacology and decides to focus his or her practice on children with brain disorders. Such a priority could lead to highly focused expertise in the use of a combination of psychological assessment and treatment combined with psychotropic medication for children who have

brain injuries. This choice would limit the practitioner to the treatment of children with brain disorders who were in need of a combination of psychology and psychopharmacology. Not all of those professionals who are on route to expert competency need to prioritize to such a limited population, but many experts do so.

6. *Experts Are Proficient Communicators of Their Area of Expertise.* Some experts are skillful and productive writers, who publish books, articles, manuals, and newsletters that contribute significantly to the literature in their area of expertise. Other experts are proficient speakers who give workshops and conference presentations, who are talented teachers and consultants and who aid others to learn about their area of expertise. Prescribing psychologists who have exceptional ability in writing or speaking often become professors or clinical consultants.

18.8.4 Current Trends in Competency in the Field of Psychology

How do we know who is a competent psychologist? What are the indicators of competency within the field of psychology? Three trends that have signaled a "new era of competency" (Barlow, 2008, p. 8) in psychology are the following:

1. The first trend is the public recognition that psychological treatment is as effective as psychopharmacological treatment. Barlow warns, however, that one of the important ingredients that underlie this recognition, and that contributes to successful treatment outcome, is the competence of the therapist. Without competency in the therapist, the psychological treatment procedures, as validated as they may be, will not lead to a successful outcome. Psychological treatments will be efficacious if they are competently applied by a skillful therapist. Competent psychologists can be identified as those who use validated treatments and are successful with their treatment cases.

2. The second trend that signals the beginning of a new era of competency is an ever increasing utilization of outcome assessment in evidence-based practice to evaluate treatment success. Outcome assessment can identify the level of competency of an individual therapist as well as identify which treatment setting is applying evidence-based treatment most successfully.

3. A third trend that has signified a new era of competency is the combined use of psychological and psychopharmacological treatments for mental disorders. In the case of psychotic disorders such as schizophrenia, the addition of a psychological treatment to a psychopharmacological treatment doubles the efficacy of the medication. Until recently, such a beneficial effect had not been found with anxiety disorders. Hoffman (2006) showed that D-cycloserine, a partial agonist of the NMDA neurotransmitter enhances the effect of exposure-based psychological treatment for fear and anxiety. Such a finding forecasts the application of similar medication enhancement to other mental disorders. The professional who would be most competent to carry out this combined treatment would be a prescribing psychologist with advanced training in psychopharmacology.

18.9   Summary

This chapter provides a description of competencies needed by a professional psychologist, who have been educated to prescribe or provide consultation in psychopharmacotherapy.

A small number of clinical psychologists in the United States have been certified to prescribe psychotropic medications for their patients. These prescribing psychologists are located in Guam, New Mexico, Louisiana, and the military. These "medical psychologists" need to be competent in both clinical psychology and clinical psychopharmacology. They have been well educated in the use of diagnostic assessment in both psychology and medicine. They know evidence-based psychological treatment and evidence-based medicine. They are basically competent in the understanding of maintaining mechanisms in both psychopathology and pathophysiology. They are basically competent to engage in supervision, management, and consultation in their areas of competence. They have had coursework in both psychological and medical ethics, and appreciation of diversity for both psychological and medical health service. Another larger group of clinical psychologists in the United States has been trained in the same manner as these medical psychologists, but do not live in regions of the country where they may be licensed to prescribe medication, or who do not chose to do so. These clinical psychologists are considered to be basically competent to engage in consultation regarding the same topics. Both of these groups of clinical psychologists who are competent in clinical psychopharmacology tend to progress toward expert competence through continued education, clinical practice, teaching, research, and consultation. They reach the expert level most often through competencies in subtypes of practice.

Appendix

Seven Academic Content Areas of Specific Competency. The primary skills expected of a clinical psychologist who has basic competency in clinical psychopharmacology are the following:

1. *Neurosciences*. For the clinicians to understand the brain tissues in which psychopharmacological medications have their effects, they need to have a thorough knowledge of neuroanatomical structure; neurochemistry and neurophysiological function of neurons; central nervous system and peripheral nervous system neuronal pathways and their functions; vascular supply of the brain, and the blood-brain and placental barriers; cellular and molecular nervous system biology and regulatory processes and second messenger systems; endocrine system and the interface of various hormones and other neurotransmitters; major neurotransmitter and neuromodulator synthesis, storage, release, distribution throughout the brain and the rest of the body; action, reuptake, and degradation of neuropeptides; etiological factors and diagnosis of sleep disorders as related to the nervous system and psychopathology; neurodiagnostic markers of neurobehavioral disorders.

2. *Neuropathology*. For them to understand the interaction between neuropathology and psychopathology, clinicians need to have a thorough knowledge of neurological disorders such as dementia, delirium, pain, Parkinson's, Huntington's, and Tourette's syndromes, mental retardation, fetal alcohol syndrome, pervasive developmental disorders, Fragile-X syndrome, CNS vascular disorders, seizure disorders, traumatic brain injury, multiple sclerosis, infectious diseases, neoplasms, schizophrenia, affective disorders, anxiety, ADHD, and the mechanism of extrapyramidal dysfunction.

3. *Pharmacology*. For them to understand the interaction between medications for other diseases and those for mental disorders, clinicians need to have a thorough knowledge of general pharmacology principles. These would include, but not limited to, drug

classifications and pharmacokinetic principles such as absorption, bioavailability, volume of distribution, protein and tissue binding, metabolism, elimination and clearance, and half-life. Pharmacodynamic principles such as dosing, potency, efficacy, toxicity, types of drugs and other agents interacting with receptors (e.g., agonists, antagonists, and inverse agonists), drug-induced cellular adaptation (e.g., cellular signaling of ion channels, second messenger systems, neurotransmitter release, sensitivity, and supersensitivity), drug effects on genetic expression, mechanisms of action of a range of pharmacotherapeutic agents, the theoretical relationships thought to exist between neurotransmitter systems and psychopathological conditions are also included. In addition, drug–drug, drug–disease and drug–food interactions, drug-induced disease and dysfunction, and adverse reactions, genetic polymorphisms, familial patterns of drug response and toxicity, and pharmacoepidemiology are also considered. Understanding the development of drug tolerance, dependence, and withdrawal syndromes is necessary. Also knowledge of the U. S. Food and Drug Administration (FDA) drug development process and the current status of research regarding specific medications is necessary.

4. *Psychopharmacology*. For them to be capable of properly selecting and prescribing appropriate medications for their patients, clinicians need to have a thorough knowledge of indications, contraindications, and off-label uses of various psychotropic and adjunctive medications, and the rational for psychotropic medication selection, taking into account target symptoms, patient and family history, premorbid personality, demographics, comorbid medical conditions, existing medication regimen and potential for interactions, and differences among medications within classes of drugs. Knowledge of dosing, time course of therapeutic action, and adverse effects; patient factors that influence dose, therapeutic monitoring, augmentation strategies; dose adjustment, route of administration, management of adverse reactions, interactions, relapse prevention, drug effects in special populations; psychological and physiological manifestations of recreational substances and treatment of intoxication or addiction, including strategies for assisted withdrawal, maintenance, and relapse prevention, tolerance, cross tolerance, dependence and withdrawal; sensitization/cross-sensitization with respect to specific medications; and the management strategies used to treat them are necessary. Clinicians also need to be trained in the method of combining psychological treatment with psychopharmacotherapy, especially its adaptation to be used in children and the elderly. They need to learn how to use computer-based practice aids to search the literature for research findings regarding practice and updates on medications and their applications, as well as epidemiological findings about diseases.

5. *Anatomy, Physiology, Pathophysiology*. For clinicians to understand the anatomical basis for disease, and understand the relationship between disease and mental disorder, they need to have knowledge of normal anatomy and physiology and pathophysiology including cardiovascular, pulmonary, renal/genitourinary, hepatic, endocrine, hematological, muscular, skeletal, dermatologic, and immunologic/rheumatology, and reproductive systems, and how each of these systems is affected by psychopharmacological medications. An excellent example of these potential interactions is the issue of how many psychotropics have been associated with an increased risk for hyperglycemia, hyperlipidemia, and weight gain requiring special monitoring and careful consideration in psychotropic drug selection in patients with preexisting diabetes mellitus or hyperlipidemia and the possible changes in treatment selection when these drug–disease interactions or drug-induced adverse reactions occur (ADA, 2004; Rey 2002, 2006b).

6. *Physical Assessment, Laboratory Exams and Differential Diagnosis*. Clinicians also need to be trained in assessing pathophysiology through the use of a physical exam, interpreting the results of laboratory tests and arriving at a differential diagnosis of disease.

7. *Special Issues in Pharmacotherapeutics*. Finally, clinicians must know psychotherapy–pharmacotherpy interaction, computer-based practice aids, pharmacoepidemiology, and professional, ethical, legal, and interprofessional issues.

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19 Managing Suicidality

Kelly C. Cukrowicz · Phillip N. Smith · Erin F. Schlegel

Abstract: A high percentage of individuals who die by suicide are in treatment at the time of their death. This speaks to the importance of ensuring adequate training for mental health providers in the assessment and treatment of suicidal behavior. This chapter provides information on areas of competence that are essential for clinicians working with patients at risk for suicide. Specifically, this chapter provides guidelines for assessing suicide risk and ensuring patient safety, as well as data on factors that maintain suicidal behavior. An overview of the literature on empirically-based treatment of suicidal behavior is provided, as well as data on the mechanisms of action for these treatments. Importantly, this chapter provides an overview of the basic competencies of clinicians working with patients at risk for suicide and the steps necessary to move from basic competence to expert competence.

19.1 Overview

The ability to effectively evaluate and treat suicidal behavior and patients with elevated suicide risk is a critical skill in routine clinical practice for psychologists. Suicide is the 11th leading cause of death in the United States with approximately 30,000 deaths by suicide each year (Center for Disease Control, 2007). Previous research has indicated that as many as 50% of individuals who died by suicide were in treatment at the time of their death (Fawcett, 1999). This highlights the importance of adequate training to achieve at least a basic level of competence in offering services to patients who may be at risk for suicide. The purpose of this chapter is to present information that will allow clinicians to ascertain and further develop their current level of competency in managing suicidality.

The term "suicidality" has previously been used to refer to a variety of behaviors associated with suicide, including thoughts of suicide, self-harm, plans and preparations for suicide, suicide attempts, and death by suicide. Lack of specificity is problematic because it makes clear communication between professionals more challenging. To attempt to increase the clarity of terms associated with the suicide risk, Silverman et al. (Silverman, Berman, Sanddal, O'Carroll, & Joiner, 2007) revised the existing nomenclature (O'Carroll et al., 1996) that is used to describe thoughts and behaviors associated with suicide. Within this revised nomenclature, suicide-related ideation includes thoughts of suicide that may vary in intensity and their associated intent to engage in suicidal behavior. Suicide ideation is contrasted with death ideation, which occurs when an individual wishes for death or escape in the absence of thoughts associated with injuring oneself or taking one's own life. A suicide threat is defined as an interpersonal action that can be interpreted as an indication that the individual plans to engage in suicidal behavior in the future. A suicide plan consists of the actions an individual plans to take that will lead to self-injury or death.

This nomenclature also includes careful definitions of behaviors that bring about self-injury to an individual. These terms include self-harm, suicide attempt, and suicide. Silverman

et al. (2007) define self-harm as behaviors that are "self-inflicted, potentially injurious with a nonfatal outcome for which there is evidence that the person did not intend to kill himself/ herself" (Silverman et al., p. 272). A suicide attempt is defined identically with the exception that the behavior involves the intention to die. This intent can range from mild, which involves a great degree of ambivalence, to severe. Self-injurious behavior that is engaged in with the intention for death (with a nonfatal outcome) is classified as a suicide attempt. It is important to note that self-harm and suicide attempts may result in no injury, injury, or death. If death occurs, it is classified as an accidental death in the case of self-harm (i.e., no intent for death) or as death by suicide in the case of a suicide attempt (i.e., intent for death). These terms will be used throughout this chapter to refer to thoughts and behaviors associated with suicide risk. It is our hope that these clear definitions will aid in understanding the content of this chapter.

As previously stated, the goal of this chapter is to aid clinicians in developing skills associated with assessing and treating patients who may be at the risk of suicide. This chapter begins with a discussion on the recognition and assessment of elevated suicide risk. Within this section, we provide an overview of risk factors for suicide, strategies for determining current risk, and assessment tools that can aid in this endeavor. We will then discuss factors that maintain suicide risk and contribute to the desire for death (e.g., hopelessness, emotional pain). Subsequent sections of the chapter will include a review of evidence-based treatment approaches and evidence for the mechanisms of action underlying successful treatment outcomes. The final sections of the chapter will focus on the basic and expert competencies of clinicians, as well as the necessary skills and training tasks associated with the transition from basic to expert competency. Within these sections of the chapter, we will present eight core competencies described by a partner project of the Suicide Prevention Resource Center and the American Association of Suicidology (Suicide Prevention Resource Center, 2006).

19.2 Recognition and Assessment

The collection of accurate information, while highly dependent on establishing a relationship of trust, is also dependent on knowing which questions are important to ask. While it is impossible to gauge with certainty who will and will not attempt and die by suicide, we endorse an approach that emphasizes identification of risk and protective factors in a manner that is empirically supported and theoretically meaningful. This approach focuses on factors that have been demonstrated to be associated with suicide to identify a level of risk: low, moderate, and high (see Joiner, Walker, Rudd, & Jobes, 1999 for a thorough review of risk designation). These factors cover separate domains of suicide or components informing risk: (1) previous attempt status, (2) distal risk factors for suicide, (3) suicide symptom presentation, and (4) warning signs or stressors.

Research has demonstrated that the strongest predictor of future suicide attempts is a history of past attempts (Joiner et al., 2005). As such, a patient's suicide attempt status is one of the most important factors in determining risk. Specifically, a patient who has multiple suicide attempts is at a greater baseline level of risk when compared with never and single suicide attempters (Joiner et al.). It is important to note that many individuals do attempt and die by suicide on their first attempt and that the lack of previous attempts is in no way a guarantee of

safety. Rather, a patient with multiple suicide attempts is more likely to attempt when a number of other risk factors align. In addition to previous attempt status, there are a number of other more distal risk factors for suicide. Demographic risk factors include male gender, age 45 and above, divorced or widowed, solitary living situation, and unemployment (Bryan & Rudd, 2006; Brown, Beck, Steer, & Grisham, 2000). Psychiatric risk factors include a mood disorder (Major Depressive Disorder, Bipolar Disorder), substance use disorder, Schizophrenia or psychotic episode, and personality disorder (particularly Borderline Personality Disorder; Brown et al., 2000; Kessler, Borges, & Walters, 1999). Additional psychiatric issues that increase risk include comorbidity, physical or sexual abuse, mixed anxiety and depression, hopeless depression, insomnia, past psychiatric hospitalization, and a general pattern of impulsivity (Brown et al.; Joiner et al., 1999; Kessler et al., 1999).

Following identification of previous attempt status, collection of information related to these risk factors is important as each provides information that informs the likelihood that an individual is or could be at risk for suicide. Specifically, for multiple suicide attempters, the presence of any additional significant risk factor (e.g., Major Depressive Disorder) denotes at least moderate risk. The presence of multiple additional risk factors (e.g., Major Depressive Disorder with prominent hopelessness, childhood sexual abuse, and substance abuse) would suggest high risk. However, it is also important to organize and integrate these risk factors with information regarding suicide symptoms.

Research exploring suicide symptoms has demonstrated that suicide can effectively be conceptualized in two parts: (1) the presence of suicide ideation and the desire for death, and (2) the presence of resolved plans and preparations for suicide (Joiner, Rudd, & Rajab, 1997). This format of organizing suicide symptoms is particularly useful as each factor is composed of specific pieces of information. Furthermore, a patient's level of risk can be assessed by evaluating his or her suicide symptom presentation (i.e., the degree to which the patient endorses suicide ideation, expresses desire for death, and possesses resolved plans and preparations for suicide) in conjunction with his or her previous attempt status and other risk factors.

The desire for death and presence of suicide ideation includes information related to "reasons for living, the wish to die, frequency of ideation, the wish not to live, passive attempt, desire for attempt, expectancy of attempt, lack of deterrents to attempt, and talk of death and/or suicide" (Joiner et al., 1999, p. 448). Resolved plans and preparations include "a sense of courage to make an attempt, a sense of competence to make an attempt, availability of means to and opportunity for attempt, specificity of plan for attempt, preparations for attempt, duration of suicide ideation, and intensity of suicide ideation" (Joiner et al., p. 448). Consistent with Joiner's (2005) model of suicide, previous attempt status, in addition to serving as a risk factor for suicide, has implications for this resolved plans and preparations factor. Specifically, an individual who has previously attempted suicide on multiple occasions is more likely to be capable of suicide (i.e., to have the courage and competence necessary, a developed plan, and access to that plan). Consistent with this theoretical relationship between attempt status and the resolved plans and preparations factor, these factors have been shown to be differentially related to suicide risk. More specifically, while presence of suicide ideation and the desire for death clearly warrants clinical attention, it is less predictive of suicide attempts and death by suicide than the resolved plans and preparations (Joiner et al., 1997). Therefore, while many patients may voice suicide ideation, this does not automatically suggest high risk for suicide unless additional suicide symptoms and/or risk factors are present. Rather, when an individual desires suicide and also has resolved to act on those thoughts, suicide risk is

increased. When combined with information regarding other risk factors for suicide, details regarding resolved plans and preparations can be an essential element of identifying potential risk of suicide.

Previous writing has distinguished between risk factors and warning signs for suicide (Rudd, Berman et al., 2006). Little research has examined warning signs; however, elevation on warning signs suggest that an individual is at imminent risk for suicide (Bryan & Rudd, 2006; Mandrusiak et al., 2006; Rudd, Mandrusiak et al., 2006; Van Orden, Joiner et al., 2006). Warning signs for suicide include such symptoms as a sense of agitation or perturbation, intoxication, psychotic symptoms, and acute distress (Bryan & Rudd; Rudd, Berman et al.). Additionally, stressors such as loss (e.g., financial, professional, etc.), acute medical conditions and chronic diseases, and interpersonal and family disruptions (e.g., divorce) are frequently related to suicide risk (Joiner, 2005). These warning signs should be considered in the context of other general risk factors and prominent suicide symptoms.

When collecting information related to suicide risk, the mnemonic, IS PATH WARM (Rudd, Berman et al., 2006) can be helpful (Ideation, Substance abuse, Purposelessness, Anxiety, Trapped, Hopelessness, Withdrawal, Anger, Recklessness, Mood changes). This mnemonic attempts to integrate much of the information discussed earlier on risk factors and suicide symptoms with warning signs to guide suicide assessment. For example, an individual experiencing suicide ideation, substance abuse, and who is demonstrating acute mood changes with anxiety or agitation might be considered at least at moderate risk. However, we again stress the importance of previous attempt status as such experiences in the context of a multiple attempt history would suggest high risk.

While we have suggested that the cumulative effect of a number of risk factors is suggestive of greater risk of suicide, it is important to organize these risk factors in a manner that provides meaningful framework for risk designation. Specifically, we argue that the combination of risk factors can effectively designate an individual as low, moderate, and high risk of suicide (Joiner et al., 2005). However, it is also important to consider protective factors against suicide.

Protective factors include "social support, problem-solving skills and demonstrations of coping skills, participation in treatment, hopefulness, the presence of children in the home, pregnancy, religious commitment, life satisfaction, intact reality testing, fear of social disapproval, fear of suicide or death," and writing about suicide in a manner that does not communicate plans or intent (Bryan & Rudd, 2006, p. 189). The presence of these protective factors should not be considered definitive evidence that a suicide attempt is not imminent. Rather risk factors can also be central to assessment of suicidal risk. While the presence of a greater number of protective factors provides evidence that the individual's risk for suicide may be diminished, information about these factors should be considered in conjunction with other information about previous attempt status, risk factors, and suicide symptoms. Furthermore, designation of risk does not perfectly correlate with the actual risk of suicide. Absolute certainty with regard to prediction of suicide risk, as we have stated, is impossible. Therefore, careful clinical judgment is vital in working with high-risk patients.

19.3   Maintenance Factors

Many studies have focused on variables that are associated with the onset or maintenance of suicidal behavior. The most recent theory of suicidal behavior, the Interpersonal-Psychological

Theory of suicide (Joiner, 2005), suggests that suicide can be understood in the context of three dimensions: (1) thwarted belongingness, (2) perceived ineffectiveness and resultant burdensomeness on others, and (3) an acquired capability for suicide. Individuals are at greatest risk for death by suicide when each of these conditions is met.

Thwarted belongingness is associated with feelings that an individual does not have important social connections with others. Such lack of connection may result from the absence of a social network (Stellrecht et al., 2006). Conner, Duberstein, and Conwell (1999) assessed men with alcohol dependence who died by suicide. Among risk factors for completed suicide, living alone and loss of a partner within the last month or two before death were particularly important. Similarly, a comparison of those who died by suicide and those who died by other means revealed that those who died by suicide were more likely to have been recently separated and living alone (Boardman, Grimbaldeston, Handley, Jones, & Willmot, 1999). The significant others of people who had recently attempted suicide pointed to loneliness as an important factor in suicide attempts (Magne-Ingvar & Oejehagen, 1999). Further, situations that foster a sense of belonging or increased connection to others have been associated with reduced risk of suicidal behavior (Joiner, Hollar, & Van Orden, 2006; Van Orden, Merrill, & Joiner, 2005).

Recent studies have begun to examine the relationship between perceived burdensomeness and suicide ideation in a variety of samples of younger adults. Van Orden, Lynam, Hollar, and Joiner (2006) examined the association of perceived burdensomeness to suicide ideation in a clinical sample of adult outpatients. This study indicated that perceived burdensomeness was endorsed by 5.5% of the sample. In addition to a significant correlation with suicide ideation, perceived burdensomeness was predictive of suicide ideation above and beyond the contribution of depressive symptoms and hopelessness (in addition to age, gender, and personality disorder status). Interestingly, there was a significant correlation between age and perceived burdensomeness, with greater perceptions of burdensomeness among those who were older. This suggests that older adults may view themselves as a burden on family and friends, at times of increasing dependence thereby increasing their risk for suicide. Similarly, Van Orden, Witte, Gordon, Bender, and Joiner (2008) found that perceived burdensomeness was predictive of suicide ideation after controlling for age, gender, and depressive symptoms in a sample of college students. A number of additional studies have also demonstrated an important link between perceived burdensomeness and suicidal behavior across age groups, suicide-related outcomes, and ethnicities (Brown, Comtois, & Linehan, 2002; De Catanzaro, 1995; Foster, 2003; Joiner, Pettit, Walker, Voelz, & Cruz, 2002; Motto & Bostrom, 1990; Pettit et al., 2002; Van Orden, Lynam et al., 2006).

Previous suicidal behavior (consistent with Joiner's [2005] construct of acquired capability) also appears to facilitate future suicide behavior. Beck (1996) has argued that suicidal behavior may sensitize individuals, such that suicide ideation and behaviors are more accessible and easily triggered. This is consistent with Rudd, Joiner, and Rajab's (2001) conceptualization of the suicidal mode (i.e., a mode in which cognitive, behavioral, physiological, and affective responses are primed for suicidal behavior). In a 20-year prospective study of risk factors for suicide among psychiatric outpatients, Brown et al. (2000) found that previous psychiatric hospitalization, *previous suicide attempts*, bipolar disorder, recurrent major depressive episode, current suicide ideation, and several demographic variables were associated with the risk for eventual suicide. Joiner and colleagues (e.g., 2005; Rudd, Joiner, & Rajab, 1996) have found that previous suicidal behavior (especially multiple attempt status) is associated with increased risk for engaging in future suicidal behavior. This relation holds even after controlling for a variety of

importance risk factors for suicide, including hopelessness and symptoms of Axis I and II disorders (among others).

Hopelessness is among the most robust risk factors for suicide attempts and death by suicide, and has been the subject of many research studies (e.g., Beck, Steer, Beck, & Newman, 1993; Chance, Kaslow, & Baldwin, 1994; Chapman, Specht, & Cellucci, 2005; McMillan, Gilbdoy, Beresford, & Neilly, 2007). Hopelessness is associated with suicide risk in children and adolescents, as well as adults. Wagner, Rouleau, and Joiner (2000) examined 100 inpatient children and adolescents between the ages of 7 and 17. Fifty percent of the sample experienced suicide ideation at admission to the unit. Those with elevated suicide ideation at admission reported significantly greater hopelessness as well as a negative attributional style.

A variety of studies have also demonstrated that self-harm may be maintained through functions such as affect regulation, self-punishment, relief from dissociation, avoidance of suicide, interpersonal influence, and sensation seeking (among others; Klonsky, 2007; Linehan, 1993). Linehan's biosocial theory of Borderline Personality Disorder (BPD) indicates that symptoms of this disorder (e.g., self-harm, suicide attempts) are associated with difficulty regulating emotions, a biological vulnerability to intense emotions, and a history of invalidation (e.g., childhood sexual abuse). A variety of studies have supported the relation between affect regulation and self-harm (Brown et al., 2002; Gratz & Chapman, 2007; Gratz & Roemer, 2004; Nock & Prinstein, 2005).

19.4 Evidence-Based Treatment Approaches

The primary task for those who provide treatment for suicidal behavior is to decrease suicidal behavior by reducing psychological pain and the symptoms of psychiatric disorders. Fortunately, suicide is a rare phenomenon; however, this leads to difficulty when attempting to evaluate the success of psychosocial interventions. To circumvent this problem, proxy measures are used as an index of reduction in suicide risk. These include suicide attempts, self-harm, and suicide ideation. In addition to problems associated with treatment for a low-base rate occurrence, most randomized clinical trials (RCTs) for disorders associated with elevated suicide risk exclude these individuals. This occurs because of ethical risks associated with the possibility of assignment to a control group; however, this practice has prevented the field from gaining knowledge of the impact of many treatments for reduction of suicide ideation, self-harm, and suicide attempts. Another obstacle to treatment research on suicidal behavior is the reticence of researchers to take on the legal risk, emotional burden, and time commitment associated with conducting treatment research with high-risk patients.

To date, well-designed RCTs have offered empirical support for four therapeutic approaches to the reduction of suicidal behavior: intensive follow-up treatment (Motto & Bostrom, 2001; Vaiva et al., 2006; Welu, 1977), cognitive behavior therapy (Brown et al., 2005; Rudd et al., 2001; Salkovskis, Atha, & Storer, 1990), interpersonal psychotherapy (Guthrie et al., 2001), and dialectical behavior therapy (Linehan, Armstrong, Suarez, Allmon, & Heard, 1991; 2002; Linehan, Comtois, & Korslund, 2004; Linehan et al., 1999, 2002, 2006).

Intensive Follow-Up Treatment. Intensive follow-up treatment approaches typically consist of services offered to an individual following emergency room or inpatient psychiatric services for a suicide attempt. Welu (1977) compared a 4-month intensive outreach program to treatment as usual for 120 suicide attempters randomized to these two conditions. The results of

this study indicated that those assigned to the follow-up outreach program had significantly fewer repeat suicide attempts during this period. Motto and Bostrom (2001) randomized 843 patients who had not sought follow-up treatment during the 30 days following hospitalization for depression or elevated suicide risk to a usual care condition or a contact letter condition. Those in the experimental contact letter condition received a letter from hospital staff expressing concern about how the patient was doing and inviting response. These letters were sent monthly for 4 months, then every 2 months for the subsequent 8 months, and then every 3 months for an additional 4 years. Significant differences were found between the groups, with a greater time interval to suicide for those receiving the caring contact letters. Vaiva et al. (2006) randomized 605 individuals treated in 13 emergency departments who attempted suicide by drug overdose to three conditions: telephone contact to review treatment recommendations at 1 month, telephone contact (same purpose) at 3 months, and no telephone intervention. Significant differences in repeated suicide attempts were found at 1-month for those receiving the follow-up call when compared with those who did not (12% vs. 22%). These effects were maintained over the first 6 months. No impact was apparent for those receiving calls at 3 months following emergency contact.

Cognitive Behavior Therapy. Several treatments for suicide risk have been developed that utilize cognitive and behavioral principles. Salkovskis and colleagues (1990) randomized 20 patients to either a five-session cognitive behavioral problem-solving intervention or treatment as usual. The cognitive behavioral problem-solving intervention targeted identifying problems, generating solutions, obtaining goal outcomes, and greater cognitive flexibility. The results of this study indicated significantly greater change on depression, hopelessness, and suicide ideation following treatment and at 1-year follow-up when compared with the treatment as usual condition. Importantly, repeated self-injury was significantly lower in the cognitive behavioral problem-solving group. Rudd et al. (2001) developed a cognitive behavior therapy (CBT) approach for resolving suicidal behavior. Early sessions focus on resolving suicidal crises and completing a coping card that provides instructions for activities to carry out when urges for suicidal behavior re-emerge. These sessions also focus on reducing problematic psychological symptoms (e.g., insomnia, loneliness, sadness) through behavioral activation, sleep hygiene, and seeking social support (among others). Subsequent sessions focus on examining thought patterns that typically lead to urges for suicidal behavior and developing strategies that can be applied in daily life (e.g., problem-solving, emotion regulation, cognitive restructuring). Rudd, Rajab et al. (1996) evaluated the efficacy of an intensive, short-term group therapy version of this intervention for individuals at risk for suicide as a function of a suicide attempt that precipitated a referral for additional care, mood disorder with concurrent suicide ideation, and alcohol abuse with concurrent suicide ideation. Three hundred and two participants were randomized to the intervention or a treatment as usual control condition. Follow-up assessment of participant improvement indicated that participants in both groups reported improvement in suicide ideation and behavior and associated symptoms (e.g., depression, hopelessness, problem-solving, stress) at 1, 6, 12, and 18 months following treatment.

Brown and colleagues (2005; Brown, Jeglic, Henriques, & Beck, 2006) developed a cognitive therapy (CT) approach that aims to reduce suicidal behavior though 10 brief, focused therapy sessions aimed at decreasing thoughts, images, and core beliefs that occurred in proximity to a prior suicide attempt (e.g., hopelessness, poor problem-solving, impulse control, social isolation, treatment noncompliance). Early sessions are designed to allow for the establishment of

the relationship between the therapist and patient, a commitment to treatment, and the development of a safety plan (including coping strategies, written out safety plan). Subsequent sessions include behavioral strategies aimed at increasing pleasurable activities, social support, and treatment compliance, as well as a focus on developing effective cognitive coping strategies. The final sessions focus on mastery of a relapse prevention task, which includes a visualization exercise that requires the patient to develop more effective strategies to address events, thoughts, and behaviors associated with a previous suicide attempt.

An RCT was carried out to evaluate this intervention (Brown et al., 2005). One hundred and twenty adults who had attempted suicide within 48 hours of an evaluation in the emergency department were randomly assigned to this treatment or to usual care. Follow-up assessments conducted at 1, 3, 12, and 18 months examined repeat suicide attempts (including number of days to attempt), suicide ideation, hopelessness, and depression. During this 18-month period, 24% of the CT participants and 41% of the usual care participants reattempted suicide. Examination of suicide symptoms indicated that CT resulted in greater reductions in depressive symptoms (at 6, 12, 18 months), and hopelessness (at 6 months).

Psychodynamic Interpersonal Psychotherapy. Guthrie et al. (2001) examined a brief psychodynamic interpersonal psychotherapy intervention for individuals being treated for a suicide attempt in an emergency setting. One hundred and nineteen individuals who had attempted suicide through deliberate self-poisoning were assigned to this intervention or treatment as usual. Those in the intervention condition received 4 in-home sessions of treatment. Weekly sessions were delivered by nurse therapists and included assessment of suicide risk, attempts to resolve interpersonal difficulties, and consultation with a treating physician. Six months following treatment, participants randomized to the psychodynamic interpersonal psychotherapy intervention reported significantly greater reductions in suicide ideation (mean Beck Scale for Suicide Ideation 8.0 vs. 1.5) and repeated suicide attempts (9% vs. 28%), compared with the treatment as usual group.

Dialectical Behavior Therapy. Of the intervention strategies used to treat suicidal behavior, dialectical behavior therapy (DBT; Linehan, 1993) has been the treatment utilized in the greatest number of RCTs (Koons et al., 2001; Linehan et al., 1991, 1999, 2002, 2004; Lynch et al., 2007; Turner, 2000; Verheul et al., 2003). This treatment was developed for individuals with Borderline Personality Disorder (BPD). Patients with BPD are at heightened risk for suicide as a function of self-harm, suicide attempts, and chronically elevated suicide ideation. DBT is a flexible treatment in which patients participate in individual therapy and a once-weekly skills group. In addition, therapists participate in a consultation team, and are available for coaching calls from patients between sessions. Individual sessions target life interfering behavior, therapy interfering behaviors, and behaviors that impact the quality of life of the patient. A variety of strategies are used during these therapy sessions including validation, balancing acceptance and change, behavioral chain analysis, contingency management, examining cognitions, and behavioral exposure. Group skills training includes four modules of skills that are necessary for behavioral stability and progress in treatment, including: mindfulness, emotion regulation, interpersonal effectiveness, and distress tolerance. As noted above, a variety of RCTs have evaluated the efficacy of DBT and have found positive results. Across these studies, results have indicated that when compared with control conditions (typically treatment as usual), DBT results in significantly greater reduction in self-harm, suicide attempts, and suicide ideation (e.g., Koons et al.; Linehan et al., 1991, 1999, 2002; Verheul et al.).

19.4.1 Mechanisms

Owing to the recent development of many of the psychological treatments for suicidal behavior, very little research has been conducted that examines possible mechanisms of change for the therapy approaches described above. In fact, a literature review revealed that mechanisms of change have been examined only for DBT. Lynch and colleagues (Lynch, Chapman, Rosenthal, Kuo, & Linehan, 2006) published a review article that examined mechanisms of change underlying the efficacy of this treatment. In this review, mechanisms of change are provided for mindfulness, validation, targeting and chain analysis, opposite action, dialectical strategies, and the client–therapist system.

As indicated by Lynch et al. (2006), mindfulness may result in reductions in symptoms of BPD through the broad focus on acceptance of painful emotional experiences. This willingness to experience aversive emotional and physical states may lead to an individual's ability to learn new behaviors and responses through exposure to unique or feared situations. Lynch et al. also indicated that mindfulness may increase an individual's ability to regulate emotions through attentional control and "automatic response tendencies [that occur] when the patient observes, describes, and participates in emotional experiences without acting on them" (p. 465). These response tendencies may then alter the context of the event and its associated emotional response.

Similar mechanisms are offered for the benefits of opposite action, which includes choosing an opposite action urge and engaging in an associated behavior when an emotion is not warranted. For example, a client may report that she felt guilt when she said that she could not take on another responsibility at work given her already full plate. Opposite action would involve choosing a behavior that is inconsistent with guilt (e.g., making eye contact, keeping her head up). Lynch et al. suggest that opposite action leads to beneficial therapy outcomes caused by exposure and response prevention, broadening of behavioral responses, and altering cognitive and emotional experiences.

Lynch et al. (2006) also provide several hypothesized mechanisms of action for changes associated with the use of validation and dialectical strategies. They suggest that validation may lead to increased stability of self-views (self-image, sense of self) and increased motivation to participate in therapy. Validation may also influence change strategies occurring in session. Specifically, the purposeful use of validation in session (e.g., increased or decreased) may serve as a behavioral contingency (i.e., validation reinforces skillful actions), as well as a tool for teaching the patients to validate themselves (i.e., modeling). Dialectical strategies (e.g., balancing different communication styles, magnifying tensions) often create an environment in which the patient is not sure about what to expect from the therapist, thus facilitating increased attention and learning of new responses in session.

Several mechanisms are also offered for the effectiveness of targeting specific behaviors and conducting chain analyses of problematic behaviors. Lynch et al. (2006) suggest that these change strategies may be effective through the aversive nature of discussions on these behaviors (e.g., self-harm, drug use). In addition, chain analysis also provides an opportunity for the patient to re-experience painful emotions (e.g., shame) while considering more adaptive alternatives than was selected in the situation being examined. Targeting specific behaviors and chain analysis may also be beneficial as a result of enhanced memory of the chain of events leading to previous problematic behaviors and the selection of skillful responses in subsequent times of vulnerability. Lynch et al. also suggest that these strategies are associated with learning

new skillful behaviors through learning occurring in-session and then obtaining coaching outside of session to gain skill in using these skills in daily life.

The final element of DBT that may enhance therapy outcomes is the client–therapist system. Lynch et al. (2006) suggest that the constant striving for a synthesis of opposite ends of a dialectic may serve to reduce polarization or black-and-white thinking commonly experienced by individuals with BPD and/or elevated suicide risk. In addition, the inclusion of a consultation for the therapist enhances client outcomes through increased therapist efficacy and confidence.

19.5   Basic Competencies of the Clinician

The magnitude of this important public problem underscores the critical importance of adequate training for mental health practitioners to care effectively for individuals at risk for suicide. The National Strategy for Suicide Prevention (Satcher, 2001) includes goals associated with the need for adequate knowledge of issues associated with the assessment and treatment of suicidal behavior. For example, one goal is to implement training for recognition of behaviors associated with increased risk, and delivery of effective treatments for these behaviors. To address this need for adequate dissemination of information regarding suicide and related behaviors, the Suicide Prevention Resource Center (SPRC) partnered with the American Association of Suicidology (AAS) to define core areas that mental health practitioners should gain knowledge to be competent in the delivery of services to individuals who may have heightened suicide risk. In this context, eight "core competencies" were identified (SPRC, 2006). The SPRC defines core competencies as "clusters of knowledge, skills, abilities, and attitudes or perceptions required for people to be successful in their work. In this case, core competencies refer to the clinical evaluation, formulation of risk, treatment planning, and management of individuals at risk for suicide to protect their lives and promote their well-being."

The eight core competencies identified include: (1) Working with individuals at risk for suicide: Attitude and approach; (2) Understanding suicide; (3) Collecting accurate assessment information; (4) Formulating risk; (5) Developing a treatment and services plan; (6) Managing care; (7) Documenting; and (8) Understanding legal and regulatory issues related to suicidality.

Working with the Suicidal Patient: Attitudes and Approach. Discussion on suicide can elicit negative reactions from clinicians, including fear, anxiety, hopelessness, frustration, anger, sadness, avoidance, defensiveness, and others (Birtchnell, 1983). Furthermore, patient deaths by suicide have been associated with therapist reactions of shock, anger, a sense of guilt, anxiety, doubts about competence, grief, fear of blame, shame, and betrayal (Hendin, Lipschitz, Maltzberger, Haas, & Wynecoop, 2000; Mennenger, 1991). While a general sense of anxiety may promote a sense of urgency, many of these reactions can serve to inhibit an effective clinical interaction.

For example, during the second author's (P. N. S.) first intake interview for a department outpatient psychology clinic, he was experiencing some anxiety given that this was his first interview. However, that anxiety spiked to shear panic when the patient said, "I've been feeling really down. In fact, last night I decided that next week [Valentine's Day], I am going to kill myself." At that moment, the second author found himself fearful about not knowing the "right"

thing to do to complete an assessment and reduce the patient's suicide risk. While he had been trained in the appropriate questions to ask, he found the experience very different. The author found himself less concerned with the patient as an individual in pain and more concerned with carrying out procedures. Fortunately, he was receiving good supervision at the time and was able to consult about his feelings and the best way to proceed to ensure the patient's safety.

Clinicians frequently worry about the legal and professional ramifications of patient suicide, which may prompt rigid adherence to a procedure at the expense of a genuine human interaction. Fearful avoidance is also a common reaction that may result in statements such as "Yeah, you think things would be easier, but you'd never do anything like that right?" Strong principles against suicide might even result in admonishment of the patient with statements like, "But how could you do that when you've got children and a family to care for?" Such statements are neither good clinical practice, nor are they helpful for the patient. To *effectively* work with the suicidal patient, it is important that we be aware of our attitudes, fears, and understanding of suicide.

It is important that clinical service providers be consistent in how they interact with patients who describe thoughts of suicide. Extreme changes in a clinical service provider's demeanor can alter a developed alliance, make the patient even more uncomfortable, and possibly influence the patient to keep silent in times when he or she need to be the most vocal about experiences. It is also critical to be clear with patients that you are working toward the same goal (i.e., to end suffering). The patient may view suicide as a solution to psychological, emotional, and/or physical pain (cf., Shneidman, 1996). While it is your goal to ensure the safety of the patient by preventing suicide, it is critical to communicate that you plan to do this by reducing emotional pain. This bridges the goals of the patient and the clinician and helps one to avoid arriving at an impasse of conflicting goals.

Understanding Suicide. A number of theoretical models of suicide have been offered (cf., Baumeister, 1990; Beck, Brown, & Steer, 1989; Durkheim, 1951; Joiner, 2005; Linehan, 1993; Rudd, 2000; Shneidman, 1996). While a full review of these models is beyond the scope of this chapter, having knowledge of these conceptualizations allows a more effective understanding of patients. For example, in the example provided above, it would be most effective to communicate to the patient a goal of reducing the current emotional pain by focusing on those experiences that are functionally implicated in the patient's suicide symptoms (according to theories mentioned earlier). In this case, the patient's depression could be linked to unfulfilled needs for affiliation and the lack of romantic relationship; hence, the implication for the chosen day for his planned suicide. This level of understanding could have led to a discussion on how the patient's difficulties in these areas may have been related to his distress and to begin to discuss how things could be done to remedy those problems. A collaborative discussion of this nature allows the suicidal client the opportunity to describe his or her concerns in a manner that may instill hope.

The understanding of suicidal behavior is also facilitated through the conceptualization of the behaviors included in various treatment approaches (e.g., Linehan, 1993; Rudd et al., 2001). Within DBT, self-harm and other suicidal behaviors are partly conceptualized as emotional regulation strategies. The use of various skills, such as distress tolerance, may diminish the emotional pain that lead to a desire to engage in self-harm. Rudd et al. provide four interactive processes (cognitive, behavioral, physiological, effective) that are associated with suicidal behavior. Thus, a clinician's clear understanding of this suicidal mode for a given client may facilitate recognition of changes in risk.

Collecting Accurate Assessment Information. As managed care becomes an increasingly important element of psychological service provision, clinical service providers are increasingly required to limit the amount of time they spend with patients (Hayes, Barlow, & Nelson-Gray, 1999). This requires providers to prioritize the issues discussed, often leaving off many things patients would like to cover. Despite these increasing limitations and the avoidance behaviors evoked by the anxiety associated with suicide, ensuring that a clinical service provider makes an inquiry regarding suicide risk is of paramount importance. When determining how and when to incorporate questions about suicide symptoms, a number of approaches are available. These approaches can be viewed as more or less appropriate in light of considerations such as the setting, the therapeutic alliance, and the immediacy of risk.

The first approach is most appropriate for patients in ongoing individual or group therapy. This therapeutic context allows for the incorporation of ongoing assessment, be it objective testing, weekly check-ins, or other forms of monitoring. For example, a patient being treated for Major Depression might complete the Beck Depression Inventory-II each week prior to the session. This instrument includes an item inquiring about suicide symptoms that can be readily scanned before the session begins. DBT for BPD incorporates diary cards that explicitly include monitoring of suicide and self-harm symptoms (Linehan, 1993). These cards are typically used early in individual sessions, as suicide and self-harm are treated as the highest priority in this treatment.

Encounters that do not lend themselves to such brief initial assessment of symptoms on an ongoing basis should also include attention to suicide symptoms early in the interview. For example, intake screening interviews, consultation interviews, and other brief, focused encounters may not allow for formal testing or include an established therapeutic relationship; making it difficult to address suicide symptoms directly and early. However, that does not absolve the clinical service provider from assessing suicide symptoms.

In such situations, we have found it helpful to offer a comment aimed at initiating rapport. For example, statements like, "I know it can be difficult to talk about these problems and experiences with someone you've just met. I really appreciate you taking the time to talk to me and I really want to work with you to do whatever we can to help you out." Such a statement will serve to validate any discomfort the patient is experiencing, demonstrate that you are on their side, and begin to facilitate a collaborative, non-adversarial relationship.

Following such an initiation at developing rapport within brief encounters, we have also found it helpful to present a number of questions as standard questions that may or may not apply to them. Such questions can include items addressing attention, memory, and orientation to the situation, psychotic symptoms, identifying information, living arrangement, occupation, and suicide symptoms. Presenting questions about suicidal symptoms in a standardized manner may help one to remove the discomfort experienced by the patient and the interviewer in situations in which rapport has not yet been fully established. However, it is important to note that such questions should be offered in a way that normalizes and reduces the stigma patients often associate with their suicide symptoms.

Inquiring about suicide symptoms early in an interview can be vital to identifying potential risk early and allowing for ample time for thorough assessment and safety management. However, directly addressing suicide symptoms early in a manner that elicits truthful responding may not always be possible. For patients who are defensive, interpersonally distant, or overtly anxious, the interviewer may be required to work up to directly addressing suicide. By beginning with less threatening material and actively working to demonstrate empathy and

establish a collaborative alliance, the encounter can move toward a more safe and open interaction in which the patient is more likely to report suicide symptoms accurately.

Regardless of which approach is most appropriate, inquiring about suicide symptoms is essential. Many patients may not offer information on their suicide symptoms without prompting and some health service providers do not inquire about suicide. The importance of this is highlighted by statistics that suggest that many older adults who go on to die by suicide often have contact with medical service providers within the month prior to suicide (Conwell, 1994). Additionally, when asking questions about suicide, it is important to be direct and thorough (Goldberg, 1987). Asking questions in a manner that is vague and evasive can cause confusion and further discomfort. Questions about suicide should be explicit and direct and should not stop with an initial denial of current suicide ideation. For example, a patient who reports that they are not thinking about suicide should be asked about past suicide attempts and ideation. Such a direct, thorough addressing of suicide symptoms early in an encounter in a manner that is empathic and promoting of rapport will serve to elicit more accurate information that can be used to determine appropriate safety and treatment plans.

Formulating Risk. The information we have discussed thus far describes important symptoms, risk factors, and warning signs for suicide. While we have suggested that the cumulative effect of a number of risk factors is suggestive of greater risk of suicide, a more structured manner of risk designation is warranted. Specifically, we argue that the combination of these risk factors can effectively designate an individual's level of suicide risk as low, moderate, or high. Note that this system emphasizes risk factors as opposed to warning signs (Bryan & Rudd, 2006). Furthermore, the designation of risk does not perfectly correlate with actual risk of suicide. Such prediction, as we have stated, is impossible.

A number of studies have demonstrated that the single strongest predictor of future suicide attempts is past attempts (Joiner et al., 2005). As a consequence, the formulation of risk we have adopted begins with the designation of attempt status. For those patients with a multiple suicide attempt history, the presence of any other significant risk factor confers at least a moderate risk (see Joiner et al., 1999 for a thorough description of risk designation). For multiple attempters who evidence a number of risk factors and prominent suicide symptoms associated with resolved plans and preparations, a designation of high risk is warranted. Individuals with a single or no suicide attempt history will be designated as at least moderate risk if they also evidence symptoms of resolved plans and preparations and an additional risk factor. Single and non-attempters would be designated as high risk if they also experience multiple additional risk factors. Lastly, individuals with a single or no suicide attempt history who do not evidence resolved plans and preparations would only be designated to be at least moderate risk if they also report suicide ideation and the desire for death in combination with two or more additional risk factors. Individual exhibiting no risk factors or suicide symptoms can be designated as low suicide risk.

Guidelines for intervention based on the risk designation have been offered (Cukrowicz, Wingate, Driscoll, & Joiner, 2004; Joiner et al., 1999; Rudd et al., 2001). Patients who at low risk should be given the phone number and locations of emergency facilities they can contact in the event that any crisis occurs. Patients who are at moderate risk should be monitored closely and treatment should be continued outside of the emergency setting. At this point, it is critical to consider increasing the frequency of therapy sessions and contact with the client to ensure ongoing awareness of changes in suicide risk. The patient should also be encouraged to seek out additional supportive individuals and communicate his or her feelings (i.e., only in safe,

supportive relationships). Patients should also be provided with information regarding steps to take in the event of increased thoughts of suicide or urges for suicidal behavior, as well as locations and phone numbers for crisis services (e.g., 1–800–273-TALK, 911, emergency room).

Finally, for patients at high risk, it is necessary to ensure safety through immediate evaluation for inpatient or emergency care. It is imperative that patients understand safety concerns and the reasons for requiring this evaluation and likely inpatient hospitalization. Following explanation of these concerns, the patient should be encouraged to voluntarily go to the emergency facility. In the event that the patient is driving or being transported by a friend, family member, or significant other, it is wise to let them know that you will call the facility to ensure they arrived safely. In the unlikely event that the person does not go as expected, you will then need to contact emergency services (e.g., the police) to pick up the individual and transport them. Similarly, if the patient refuses to go to the emergency facility for evaluation, you must contact an appropriate agency (e.g., the police) to transport your patient "involuntarily." Regardless of the level of risk and associated actions, it is critical that you continue to assess suicide risk regularly and document all actions taken to ensure the patient's safety.

Developing a Treatment and Services Plan. After the suicidal client has received a detailed psychiatric evaluation, it is imperative that a safety plan be developed in collaboration with the client. Bridge, Goldstein, and Brent (2006) indicate that the development of a safety plan often consists of the creation of a list of behaviors that the client can use to facilitate emotion regulation during future crises. A discussion of the events that preceded the most recent suicidal crisis may also help the client identify the feelings that preceded his or her urge to self-harm. A safety plan should also include specific strategies to eliminate the suicidal client's access to potentially lethal instruments (Bridge et al., 2006; Huey et al., 2004) including knives, firearms, large doses of medication, sheets, and rope. Eliminating access may often require that the clinician ensures that appropriate precautions have been taken; for example, Simon (2007) asserts that plans to remove a suicidal individual's access to guns should involve careful (and collaborative) follow-up with the person who has been designated to remove or secure the guns.

The development of a safety plan is complimented by the formation of a written plan for the suicidal client's utilization of mental health services. The format and content of this plan should be tailored to the suicidal individual's level of risk. Individuals who experience suicide ideation of limited duration that is not currently intense may be best suited to a plan that involves the provision of telephone numbers for emergency facilities that the client can call if they experience a crisis (Cukrowicz et al., 2004) and, if the client is not already seeking mental health services, the arrangement of an appointment with an outpatient provider (Roberts, 2002).

The treatment and services plan devised for individuals who are experiencing more intense and frequent thoughts of suicide but do not have an immediate plan to act on these thoughts may consist of a few additional elements distinct from the basic plan. This plan may describe a need for longer or more numerous therapy sessions and detail the specific efforts that will be employed to stay in frequent contact with clients who are struggling to stop thinking about suicide (e.g., telephone monitoring, weekly updates from close family members). For clients with this level of ideation, the written treatment plan might also specify that there will be ongoing monitoring of the client's level of risk and request that the client will contact their mental health provider if he or she begins to feel compelled to act on suicidal thoughts (Cukrowicz et al., 2004). Clients with thoughts of suicide may also benefit from having a detailed action plan to follow in the event that their desire to engage in suicidal or self-injurious behavior intensifies. The steps associated with the action plan are often provided on a "crisis card" that the client and the

therapist develop together. According to Joiner (2005), strategies provided on the crisis card help the client to identify non-suicidal activities that can be used to relieve feelings of distress (e.g., engaging in stress-reducing activities that have allowed the client to feel better in the past). If the client's suicidal impulses are not sufficiently diminished by trying the earliest strategies suggested on the crisis card, subsequent steps instruct the individual to call an emergency contact person or go to the emergency room.

Managing Care. Managing the care of a suicidal client requires that providers promote compliance to treatment and make efforts to ensure that patients continue to receive psychiatric services (Appleby et al., 1999). With respect to the first of these elements, treatment compliance, therapists should make efforts to foster an open and supportive atmosphere in which patients can address any obstacles that they encounter during the course of therapy. Jacobs et al. (2003) cite a number of different reasons that clients do not adhere to their mental health treatment, including financial limitations, difficulty in finding transportation, scheduling conflicts, confusion regarding the requirements of the treatment (e.g. uncertainty about a therapeutic homework assignment), and disagreement with the mental health provider over the recommended course of treatment.

Nevertheless, there is some evidence to suggest that consistent and thorough tracking procedures may enhance treatment compliance. In one study of adolescent suicide attempters (Piacentini et al., 1995), initial therapy appointments were scheduled within 1 week of the time that the clients were evaluated at the emergency room. Therapists kept weekly records of all therapy appointments that had been scheduled and attended or missed by each individual. Therapists called clients who missed appointments within 24 hours to arrange a time for another session. The use of this intensive follow-up approach made it considerably more likely that the adolescent attempters would participate in the early stages of treatment. Another study (Spirito, Boergers, Donaldson, Bishop, & Lewander, 2002) suggests that introducing a pre-treatment discussion on what a client can expect when receiving outpatient care and reviewing the factors that may make it less likely that the client will attend treatment improves treatment adherence among suicidal adolescents when the influence of barriers to treatment (e.g., problems with insurance coverage) are controlled.

Managing an individual's psychiatric care also involves careful attention to the manner in which treatment-related services are coordinated. Deliberate and comprehensive management of an individual's mental health services is important because loss of contact with a mental health service provider has been described as an event that commonly occurs prior to death by suicide (Appleby et al., 1999). In addition, research suggests that adult (Van Heeringen et al., 1995) and adolescent (Granboulan, Roudot-Thoraval, Lemerle, & Alvin, 2001; Piacentini et al., 1995) suicide attempters who are hospitalized frequently do not seek follow-up outpatient services. By one estimate, nearly half of all adolescents who visit the emergency room on account of suicidal behavior do not seek subsequent mental health care (Spirito, Brown, Overholser, & Fritz, 1989).

Fortunately, some evidence suggests that providing some degree of continuity among mental health services can make it more likely that suicidal individuals will remain in treatment. Granboulan et al. (2001) discovered that the adolescent suicide attempters who were more likely to seek psychotherapeutic services following their discharge were given specific instructions to seek treatment (as evidenced by the discharge plan). They also noted that individuals who received a greater number of psychotherapy sessions while being hospitalized were more likely to seek subsequent outpatient care. Jacobs et al. (2003) suggest that the coordination of mental health services can be further facilitated by regular communication between mental

health service providers, the provision of telephone numbers to call if problems or questions arise, and periodic check-ins with family members to ensure that the treatment and safety plans are being implemented.

Documentation. Comprehensive treatment of suicidal clients necessitates the use of thorough documentation procedures. For each client, a specific treatment plan, diagnostic information, psychosocial history, and information associated with any assessments should be described in detail (Callahan, 1996). Comprehensive progress notes should also be written to depict the nature of psychotherapeutic efforts and to afford a record of the information obtained through clinical interviewing (Cukrowicz et al., 2004). Another particularly important element of record keeping for suicidal clients is assessment of suicide risk. According to Jacobs and Brewer (2004), the ongoing assessments of suicide risk should provide evidence to illustrate why a patient is currently experiencing the determined level of risk. In addition, suicide risk assessments should contain a description of any alterations made to the treatment plan and the reasons for these changes.

Documentation should also occur whenever there is communication between the healthcare provider and the patient's family. Further, any discussion with family members about specific plans to eliminate a suicidal client's access to firearms or other lethal materials should be described in the patient's record (Jacobs et al., 2003). The need for documentation extends to the health professional's interactions with colleagues. Documentation should reflect any circumstances under which the healthcare professional sought group or peer consultation (Cukrowicz et al., 2004).

When documenting risk assessment and resultant clinical decisions, it is important to not only identify what pertinent information was collected and what specific clinical interventions were enacted, but to provide a rationale supporting those decisions using clear and consistent terminology (Bryan & Rudd, 2006). For example, the following documentation would quite likely be insufficient: "During individual therapy session with patient, he indicated that he was having thoughts of suicide. On discussion of these thoughts with the patient, he was deemed to be at low risk for suicide." Such a note lacks specific information that is required to justify action or inaction in such cases.

A second example is more consistent with complete documentation including a description of the pertinent information, a designation of risk, a description of the intervention, and rationale for that intervention: "During an individual therapy session, the patient reported that he was experiencing thoughts of suicide. Specifically, he reported that he had thoughts like 'Things would be better off if I were not around and I may as well just get it over with.' On questioning, the patient denied having developed a specific plan or experiencing any urges to act on these thoughts. Furthermore, the patient denied having any previous suicide attempts and identified a number of protective factors including finishing school, obtaining a job, and his current romantic relationship. The patient has also demonstrated positive use of coping skills and distress tolerance skills during treatment. However, as the patient experiences suicide ideation and a number of risk factors for suicide (i.e., Major Depressive Disorder, alcohol abuse, and a general pattern of impulsivity), he was designated to be at moderate risk for suicide. Therefore, a crisis management plan was adopted. The patient identified specific distress tolerance skills he would use during increases in suicide ideation. The patient also indicated three significant individuals he could contact in the event distress persisted. Lastly, the patient was given phone numbers for a national crisis hotline and the local emergency department. The patient has also been instructed that additional therapy sessions are available if suicide

symptoms persist. This case was further discussed with the treatment team and consensus reached on the identified plan."

The latter note contains essential elements that suggest that a thorough assessment was conducted, an appropriate plan was enacted, and that this plan had a rationale. Furthermore, it is often a good practice to receive supervision or to consult with other experienced colleagues. Such consultation further affirms that the identified assessment and plan was adequate and justifiable.

Understanding Legal and Regulatory Issues Related to Suicidality. A variety of legal issues are relevant to the care of individuals at risk for suicide. Awareness of the laws regarding mandatory evaluation or hospitalization for the protection of clients who may engage in suicidal behavior is important because these statutes vary from state to state. It is also important for practitioners to be aware of these laws so that they may strive to ensure adequate compliance. As noted above, clinicians should practice thorough documentation to ensure that the rationale for specific decisions and interventions can be understood by others examining the records. Incomplete documentation may result in greater vulnerability to lawsuits in the event of a patient suicide attempt or death by suicide. Documentation should make it clear that the therapist is engaging in services that meet the standard of care, defined as "degree of care that a reasonable person should exercise" (Black, 1996, p. 589). According to Packman, O'Connor Pennuto, Bongar, and Orthwein (2004), several allegations occur commonly in malpractice complaints following a patient suicide: "failure to predict or diagnose the suicide, failure to control, supervise, or restrain, failure to take proper tests and evaluations of the patient to establish suicidal intent, failure to medicate properly, failure to observe the patient continuously (24 hours) or on a frequent enough basis (e.g., every 15 min), failure to take an adequate history, inadequate supervision and failure to remove dangerous objects, such as a patient's belt, failure to place the patient in a secure room" (p. 700).

The two primary legal issues associated with suicide are forseeability and reasonable care. Forseeability refers to the actions required for a therapist to thoroughly evaluate known risk factors and current thoughts and behaviors to arrive at a decision regarding the patient's risk for suicidal behavior (Jobes & Berman, 1993). Following this risk determination, the therapist is expected to establish and follow through with a treatment plan based on this risk level (i.e., reasonable care; Jobes & Berman). Again, documentation is critical to ensuring clear communication with other professionals regarding these actions. This documentation and all client records are protected through the Health Insurance Portability and Accountability Act of 1996 (effective April 15, 2003). It is important that clinicians are familiar with this Act and compliance with these privacy and confidentiality policies.

19.6 Transition from Basic to Expert Competence

Within the field of suicidology, there are no defined and agreed upon criteria that mark the transition from basic to expert competence. Rather, it is the accumulation of knowledge over a period of time spent engaged in research or clinical activity within this field that marks this "expert" status. Drawing from the expert performance literature in cognitive psychology, Ericsson, Krampe, and Tesch-Romer (1993) indicate that deliberate practice is critical to establishing expertise in a particular area. Ericsson and colleagues (2007) indicate that deliberate practice is "a very special form of activity that differs from experience and mindless drill" (p. 18). They go on to explain that deliberate practice involves engagement in practice activities

that change and refine elements of performance required to move to the next level of skill through the acquisition of more complex cognitive mechanisms.

Considering this conceptualization, expert competence in suicidology would require an individual to devote a significant amount of time (i.e., years) to gaining and mastering knowledge of suicidal behavior across the domains described above (basic competencies). An expert would emerge as the individual progressed for a more basic level of knowledge to an advanced and complex understanding of this field. The expert suicidologist would gain this skill through a variety of mechanisms, including review and mastery of the literature; expression of knowledge through writing of case conceptualizations, reports, manuscripts, or books; providing services to patients; supervising trainees in attaining basic competence; and application of these areas of knowledge to advancing the science of suicidology.

It is common for the generation of this level of expertise to develop during periods of time with intensive exposure to clinical populations presenting with elevated suicide risk. The day-to-day practice of psychotherapy with patients at risk for suicide requires application of the basic competencies described above, as well as refinement of these skills. For example, a basic level of competence may be present in a clinician who occasionally treats patients with slightly elevated suicide risk (e.g., suicide ideation in the absence of plans or preparations for suicide). This individual has knowledge of many of the risk factors for suicide, methods for assessment, and guidelines for determining level of suicide risk. In contrast, expert competence is gained by a clinician who works primarily or exclusively with individuals presenting for treatment of suicidal behavior, perhaps as a function of recurrent or chronic depression or BPD. The latter clinician quickly becomes intimately familiar with models of suicide (e.g., Joiner et al., 2005; Linehan, 1993) and their implications for conceptualizing and treating these high-risk patients. This daily exposure to patients who think about suicide and have attempted suicide requires "finger tip" knowledge of theories of suicide that can be used to understand and explain painful emotions and urges for self-harm and suicide to patients. Further, expertise is gained through training and implementation of treatments designed for suicidal patients (e.g., CT, CBT, DBT).

To more clearly articulate an example of expert competence, we will provide examples of performance abilities across the basic competencies described above. The first of these competencies includes the attitude and approach to working with individuals at risk for suicide. Through acquisition of a high level of skills, the expert suicidologist is keenly aware of their emotions, thoughts, and opinions regarding their patient and the possibility of suicidal behavior. In addition, the expert may continue to feel some anxiety from time to time during crisis and high-risk situations; however, this does not impede performance as it might for an individual with a basic level of competence. Further, greater understanding of suicide allows the expert to discuss common goals with a patient (i.e., eliminating psychological pain) with a level of skill that prevents the patient from feeling that he or she has "given in" to the therapist by letting go of suicide as an option. This skillful discussion of the patient's experiences and goals evolves into a collaborative treatment plan. Finally, experts have a clear understanding of the time and resources required to treat individuals at risk for suicide and maintain clear boundaries with regard to the number of patients they will treat at any given time. Further, experts have knowledge of their limitations and needs for consultation and support and are able to seek this out from colleagues when needed.

The second basic competence is understanding suicide. This area of competence involves mastery of terms, statistics, risk factors, and models of suicide. The primary difference between an individual with basic competence and expert competence is the breadth of this knowledge.

The expert suicidologist typically is aware of more information (e.g., genetic risk factors, differences in risk factors for individuals of differing ethnic, age, and racial groups, studies finding patterns of differing results, etc.) and typically possesses an area of specialty. For example, many clinicians are trained intensively to deliver DBT for individuals with BPD. This level of training provides a breadth of knowledge that goes beyond basic competence. Researchers often gain specialized training in a particular theoretical approach, age or ethnic group, study design, or type of research that investigates specific risk factors for suicidal behavior. Regardless of the content area of specialized training, an individual's depth of understanding of suicidal behavior in that specialty area typically far surpasses that of others.

Experts also possess greater knowledge and skills in collecting accurate assessment information and formulating suicide risk. Through years of practice, an expert will have learned a broad range of assessment tools that can be used for assessment of specific risk factors that they have identified during early interactions. For example, while interviewing a patient during the intake session, the patient indicates that her emotions feel "out of control" sometimes and she has difficulty turning her attention away from urges to cut herself as a method of regulating these intense emotions. The suicide expert might ask the patient to complete the Affect Intensity Measure (Larsen, 1984) as well as asking her to indicate the number of times she has attempted suicide and engaged in self-harm. Such information as to her attempt history and the functions of self-harm are integrated with other assessment information (e.g., diagnostic status, hopelessness, plans for suicide) to allow the clinician to formulate risk with greater specificity than a clinician with basic competence. For example, the collection of information as described above would allow an expert clinician trained in the Rudd et al. (2001) CBT approach to define the suicidal mode of the client, including details about cognitive, behavioral, physiological, and affective experiences associated with heightened suicide risk states.

Development of a treatment and services plan and management of care most likely differs in content for a clinician with a greater depth of expertise in the treatment of suicidal behavior. For example, a clinician with basic competence may have no formal training in treatments designed for suicidal behavior, and would require supervision or consultation in their implementation. An expert is very likely to have gained an advanced level of training and had opportunities to use these treatments with patients presenting with a variety of presenting problems (e.g., severe depression, personality disorder, schizophrenia, eating disorder). Further, through consistent use of these treatments, experts have gained skill in the development of safety plans, crisis intervention and skills coaching, and enhancing client motivation to engage in these activities during times of crisis. Further, experts are able to engage clients in role-play and other exercises aimed at increasing knowledge of skillful behaviors and modification of crisis-oriented cognitive states. Expert clinicians also make significant efforts to reach out to other practitioners (e.g., psychiatrists, psychiatric nurses, homecare providers) to share assessment information and work together to ensure collaborative treatment plans and implementation.

Expert clinicians have gained years of practice in their work with clients and keep careful record of informed consent, information that was collected from a biopsychosocial perspective, the formulation of risk and rationale, a well-described treatment plan, the follow through with treatment plan, and consultation with professional colleagues (Rudd, Cukrowicz, & Bryan, 2008). Finally, expert clinicians possess a greater depth of understanding of legal and regulatory issues related to suicidality. For example, experts gain legal knowledge beyond that required for practice when testifying in cases of patient suicide attempt or death. In addition,

experts often consult with colleagues in states that have different policies and procedures with regard to state laws and statutes, as well as licensing regulations.

The transition from basic competence to expert competence occurs over a period of years, typically while one is in training. The form of training required to acquire expert competence in suicidology is flexible and may include pre-doctoral internship, post-doctoral or fellowship training, or intensive trainings sought after one has achieved an independent position (e.g., solo practitioner, assistant professor). This training must be provided by an individual who has achieved an expert level of competence to move the trainee to this level. This level of skill is not typically associated with graduate students; however, it is conceivable that a graduate student trained by an expert and provided with near constant ability to work with suicidal patients may gain a level of expertise that is similar to most experts.

The transition from basic competence to expert competence is often a time during which the individual reserves a significant amount of time to devote to self-awareness, content mastery, and skill acquisition. As indicated in the previous section, this development transition will occur most naturally during times of delivery of clinical services to a large number of patients with elevated suicide risk. As with any other skill, it is nearly impossible to gain this level of expertise without consistent access to individuals with the risk factors, psychological disorders, suicide history, and unique characteristics that are seen in individuals at risk for suicide. The cognitions, behaviors, histories, and psychological profiles of suicidal patients are never the same, thus, as with any other skill, expertise comes through learned to effective enact all areas of competence regardless of patient differences.

19.7 Summary

The goal of this chapter was to aid clinicians in developing skills associated with assessing and treating patients at risk for suicide. This chapter has presented an overview of risk factors for suicide, as well as important information regarding the assessment of and determination of suicide risk. Two prominent theories of suicidal behavior were discussed that include psychological experiences that may maintain suicidal behavior. This section also included a number of robust cognitive, emotional, and behavioral experiences that are associated with continued self-harm and suicide attempts. An overview and data supporting several empirically based treatment approaches were presented, including intensive follow-up treatment, CT, CBT, psychodynamic interpersonal psychotherapy, and DBT. The mechanisms underlying one of these treatments (DBT) were then discussed to provide additional information on key treatment ingredients that are associated with reduction in symptoms associated with suicidal behavior. The eight basic competencies developed by AAS and the SPRC were described, including working with individuals at risk for suicide: attitude and approach; understanding suicide; collecting accurate assessment information; formulating risk; developing a treatment and services plan; managing care; documenting; and understanding legal and regulatory issues related to suicidality. The subsequent section of the chapter described the required knowledge and skills of expert competency in suicidology, as well as examples of expert performance in the areas of competence described here. The final section of the chapter included learning and developmental experiences that occur during the transition from basic competence to expert competence. This section also included an example providing an overview of training experiences that fostered this transition.

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20 Managing Pain*

Robert J. Gatchel · Nancy D. Kishino

Abstract: The prevalence and cost of chronic pain is a major mental and physical health care problem in the United States. As a result, this has fueled a great deal of clinical research on the assessment and treatment of chronic pain. Such clinical research has led to the development of the biopsychosocial model of chronic pain, which has been shown to be the most widely accepted and most heuristic perspective in the assessment and treatment of chronic pain. This model uses physiologic, biologic, cognitive, emotional, behavioral and social factors (as well as their interplay) when explaining a patient's report of pain. In fact, in order to comprehensively assess chronic pain, one must be certain to account for such potential interactions before prescribing the best treatment regimen, which must also be individually tailored for a particular patient. The present chapter will review this biopsychosocial model, and also discuss how the model has led to the development of comprehensive interdisciplinary pain-management programs. These interdisciplinary programs have been demonstrated to be more treatment- and cost-effective than traditional medical programs that focus only presumed pathophysiology. A review of the core ingredients of these pain-management programs will be provided, as well as the basic mechanisms of change underlying such intervention and the basic competencies of health care providers involved in such interdisciplinary pain management.

20.1 Overview

As noted by Gatchel, Peng, Peters, Fuchs, and Turk (2007), the prevalence and cost of chronic pain is a major physical and mental health-care problem in the United States. For example, epidemiological research has revealed that chronic pain (which can loosely be defined as prolonged or persistent pain of at least 3 months in duration) and chronic recurrent pain (i.e., recurrent episodes of pain interspersed with pain-free periods extending over months or years) affect about 10–20% of adults in the general population (Gureje, Von Korff, Simon, & Gater, 1998). Indeed, in a large-scale epidemiological study, Von Korff et al. (2005) estimated a 19% prevalence for chronic spinal pain (neck and back) in the United States in the previous year, as well as a 29% lifetime rate. It should also be noted that individuals aged 50 years and older are twice likely to have been diagnosed with chronic pain (Gatchel, 2004, 2005). Presently, there are approximately 35 million Americans aged 65 years or older, accounting for 12.4% of the total population. Added to that, the fact that the proportion of the population aged 65 and older is expected to increase by 57% by the year 2030, with Americans now having an average life expectancy of 77 years (Social Security Administration, 2005), has strikingly increased future health-care issues of older Americans, including chronic pain problems. Finally, as summarized by Gatchel (2004, 2005), pain is a pervasive

medical problem that affects over 50 million Americans and costs more than $70 billion annually in health-care costs and lost productivity. It also accounts for more than 80% of all physician visits and is often associated with major comorbid psychiatric disorders and emotional suffering.

The above strikingly high statistics have, fortunately, fueled a great deal of clinical research on the assessment and treatment of chronic pain. The purpose of the chapter is to provide a review of the most noteworthy advances in the area of the management of chronic pain. As will be initially discussed, the *biopsychosocial* model has been shown to be the most widely accepted and most heuristic perspective to understanding and treating chronic pain. Emanating from this biopsychosocial model, interdisciplinary pain management programs have been developed and shown to be both treatment- and cost-effective. In stark contrast to the biopsychosocial model and interdisciplinary pain management programs that have been developed in recent years is the traditional and outdated approach that embraced a dualistic viewpoint that conceptualized the mind and body as functioning separately and independently. The repeated demonstration of the inadequacy of this dualistic model contributed to a growing recognition that psychosocial factors, such as emotional stress, could affect the reporting of symptoms, medical disorders, and response to treatment (Gatchel, 2004). In fact, George Engel (1977) is credited as one of the first clinicians to call for the need of a new approach to replace the outdated and overly simplistic biomedical reductionist philosophy that dominated the field of medicine since the Renaissance. This subsequently led to the growth of the field of health psychology and behavioral medicine (Gatchel & Baum, 1983), which, in turn, stimulated the development and evolution of the biopsychosocial model. As noted above, this model has been especially influential in the development of more effective interdisciplinary chronic pain management approaches.

20.2 Recognition of Symptoms and Their Assessment

As succinctly summarized in numerous recent publications (Gatchel, 2004, 2005; Gatchel et al., 2007), the biopsychosocial model conceptualizes pain as a complex and dynamic interaction among physiological, psychological, and social factors, which often results in, or at least maintains, pain. Chronic pain cannot be broken down into distinct, independent psychosocial, or physical components. Each individual also experiences pain uniquely. The complexity of pain is especially evident when it persists over time, as the range of psychological, social, and economic factors can interact with physical pathology to modulate each patient's report of pain and subsequent disability. The biopsychosocial model uses physiologic, biologic, cognitive, emotional, behavioral, and social factors, as well as their interplay, when explaining a patient's report of pain. Thus, in order to comprehensively assess chronic pain, one must be certain to account for such potential interactions before prescribing the best treatment regimen, which must be individualized for a particular patient. Gatchel (2004) offers an example of how such factors must be considered in the biopsychosocial assessment of chronic pain:

► [A] patient may present with chronic pain resulting from an earlier accident, which produced a severe musculoskeletal injury, such as bone fractures and ligament tears that have not completely healed. Besides these physical injuries and resulting pain, the accident may have led to the

inability to work again. The patient might also have self-esteem problems because he or she is viewed as being disabled and is stigmatized by it. This may have also resulted in economic problems and stressors because of the sudden decrease in income. There are debts to be paid, causing family stress, turmoil, and guilt. If this patient comes from a "macho" culture in which work and activity are highly valued, there may be even more psychosocial distress. Thus, as one can see, there are potentially multiple levels of psychosocial issues that all need to be assessed before one can develop a comprehensive pain management program for a patient such as this…One may need to assess the patient individually, as well as in the context of the family, workplace and other social situations. This is not an example of an atypical chronic-pain patient; it is more the norm than the exception. (p. 24)

There are now a number of assessment techniques that have been developed for chronic pain patients (e.g., Gatchel, 2004; Turk & Melzack, 2001). It should also be noted that several important organizations in the United States have developed new standards for the evaluation of pain. For example, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO, 2000) now requires that physicians consider pain to be the *fifth vital sign* (added to pulse, blood pressure, core temperature, and respiration) when evaluating patients. The JCAHO guidelines require that pain severity be documented, using a pain scale. In addition, the following assessments also need to be made:

- The patient's own words describing his or her pain
- Pain location, duration, and aggravating and alleviating factors
- Present pain management regimen and its effectiveness
- Effects of pain
- The patient's pain goal
- Physical examination

All of these factors need to be documented on initial assessment, along with a more thorough biopsychosocial evaluation when the pain is chronic in nature. This is important because, if not assessed and not treated, many of these biopsychosocial factors can serve as maintenance variables of the chronic pain condition, to be discussed in the following section.

20.3 Maintenance Factors of Chronic Pain

In keeping with the biopsychosocial conceptualization of pain, there are many individual differences in how people respond in the face of nociception and differences in the methods used to understand and interpret the painful stimuli. Thus, as emphasized by Turk and Monarch (2002), this makes the experience of pain dependent upon *cognitive-evaluative processes* and on *affective-motivational processes*. In terms of the *cognitive-evaluative processes*, individuals evaluate pain in terms of the perception of the consequences of the pain, the importance of the pain, and their perceived ability to quote with the pain. These various factors are delineated in ⊙ Table 20.1. These are all important factors that need to be carefully evaluated in order to determine whether they need to be addressed in the treatment.

In terms of the *affective-motivational processes*, cognitive appraisal of pain can lead to a variety of affective responses that, in turn, can affect a patient's motivation to seek and/or continue treatment. For example, patients who perceive their pain as "out of control" or as a threat

◘ **Table 20.1**

The cognitive-evaluative processes associated with pain (Turk and Monarch, 2002)

Beliefs about pain
Certain beliefs about pain (e.g., the pain signifies ongoing tissue damage; the pain is likely to persist; the pain is indicative of some underlying disease; the pain will increase if one engages in exercise behaviors or simple activities) will result in maladaptive coping, feelings of helplessness, and exacerbation of pain, increased suffering, and greater disability
Beliefs about controllability
Beliefs that one's pain cannot be controlled can lead to negative effects: subsequent nociceptive input perceived as more intense than it actually is (i.e., overreaction); decreased activity level in the hope of minimizing the pain; inappropriate medication use; psychological sequelae such as demoralization, learned helplessness/depression, and poor psychosocial functioning
Self-efficacy
Self-efficacy refers to one's belief or conviction that he or she can successfully perform certain required behaviors in a particular situation to provide a desired outcome. This construct has been shown to be an important mediator of therapeutic change. It has been demonstrated that a patient's report of low self-efficacy regarding pain control is associated with low pain tolerance, poor psychosocial functioning, greater impairment and disability, and poor behavioral treatment outcome
Cognitive errors
Cognitive errors, such as *catastrophizing* (thoughts or images anticipating negative outcomes of aversive aspects of an experience), *overgeneralization* (assuming that the outcome of one event will apply to the outcome of all future or similar events), and *selective abstraction* (paying attention only to the negative aspects of an experience, while ignoring positive aspects), can greatly influence the experience of pain and disability, as well as the concomitant depression
Coping
A number of overt and covert coping strategies can help individuals deal with pain, adjust to pain, or minimize the distress caused by pain. Overt behavioral coping strategies include simple rest, the use of relaxation methods, or the use of medication. Covert coping strategies include methods such as distracting oneself from pain, seeking information from various sources, and problem solving

are more prone to emotional distress. This affective-state-associated pain spans the spectrum, from vague unpleasantness to more discrete emotions such as fear, anger, and depression. This relation between affect and pain is both dynamic and complex. Fernandez (2002) for example, has described this as a six-factor relationship:

- When there is a maladaptive personality trait or a prior trauma, affect can be a predisposing factor in how pain is experienced and presented during evaluation.
- The affect or emotion of anxiety can often trigger pain. For example, we know that as anxiety increases, pain threshold decreases.
- Relatedly, pain and affect can be correlational in nature, necessitating the careful evaluation of their interrelationship.
- Pain may be exacerbated by affective state, such as in the case of anger creating tension that can aggravate the already existing pain (e.g., as in the case of muscle tension headache).
- Affect is often a consequence of pain, which is then referred to as "distress."

- Affect can also perpetuate pain. If a patient receives a great deal of secondary gain (such as increased nuturance and attention received from others), then he or she may use pain to get these needs continually met.

Thus, as can be seen, there is often a dynamic relationship between affect and pain. Affect can be both a consequence and an exacerbating factor in pain. It can be explained as pain causing stress, which causes more pain, more stress, and so on. Finally, the motivational aspects of this affective-motivational part of pain perception refer to an individual's willingness to perform certain behaviors. Because pain is a subjective, private, and unpleasant experience, a number of negative emotions are usually associated with it that can maintain it. Affect often leads to action, such as approach and avoidance (which are the simplest forms of action). Again, Turk and Monarch (2002) have delineated the common affective factors associated with pain: depression/learned helplessness, anxiety/pain-related fear, and anger/frustration.

Finally, there is often a significant comorbidity of chronic pain and psychiatric disorders (Dersh, Polatin, & Gatchel, 2002; Gatchel, 2004). The *big three* forms of psychopathology often associated with chronic pain conditions are major depression, anxiety disorder, and substance abuse disorders. If left untreated, these psychiatric disorders can significantly exacerbate and maintain the chronic pain problem. This is not to say that these psychiatric disorders need to be "cured," but only that they be appropriately managed in a chronic pain treatment program so that they do not interfere with the treatment process. This can be accomplished by the judicious use of pharmacotherapy, as well as the more widespread use of cognitive-behavioral treatment techniques.

20.4   Evidence-Based Treatment Approaches

There can now be no doubt that the most cost- and treatment-effective approach to the treatment of chronic pain is interdisciplinary pain management programs (Gatchel & Okifuji, 2006). In their comprehensive review of the evidence-based scientific data evaluating the treatment- and cost-effectiveness of comprehensive pain programs for chronic non-malignant pain, relative to other traditional treatment approaches (such as pharmacotherapy, surgery, traditional psychotherapy, etc.), it was clearly shown that these interdisciplinary pain management programs offer the most efficacious and cost-effective, evidence-based treatment for persons with chronic, non-malignant pain. The evidence for making this conclusion was based upon a large host of studies conducted both in the United States as well as in centers across the World. As noted by these authors, "These results are particularly impressive, given that many patients have undergone other treatments without achieving satisfactory outcomes and have come to CPPs as the last resort. If those patients could be referred early or undergo preventive programs, the clinical effectiveness and cost-effectiveness of CPPs probably would yield more improvement." (p. 790). In an independent review of the literature by Turk and Swanson (2007), the same conclusion was made that chronic comprehensive pain programs offer the most vital clinical option for persons with chronic, disabling pain problems.

Finally, it should be emphasized that the core ingredient of these interdisciplinary or comprehensive pain management programs is the simultaneous and coordinated involvement of multiple disciplines in the treatment process (i.e., physician, nurse, psychologist/ psychiatrist, physical therapist, and occupational therapist). For example, the critical elements

of an interdisciplinary pain management program, such as functional restoration, involve the following components:

- Formal, repeated assessment of quantified physical deficits, as well as psychosocial and socioeconomic variables, in order to guide, individualize, and monitor pain/disability behavior-oriented interventions and outcomes
- Multimodal disability management programs using cognitive-behavioral approaches
- When needed, psychopharmacological interventions for detoxification and psychological management
- Interdisciplinary, medically-directed team approach with formal staffings and frequent team conferences
- Ongoing outcome assessment using standardized objective outcome criteria in order to document clinical improvement

20.5 Mechanisms of Change Underlying the Intervention

As noted earlier, the biopsychosocial model of chronic pain was responsible for stimulating the development of comprehensive interdisciplinary pain management programs that were capable of dealing with the often complex interrelationships among physiological, psychological, and social factors that are involved in the development and maintenance of chronic pain. Indeed, patients suffering with chronic pain are at increased risk for emotional disorders (e.g., anxiety, anger, and depression) as well as maladaptive cognitions (e.g., catastrophizing and poor coping skills). In addition, there are often functional deficits and physical deconditioning (due to decreased physical activity and fear of injury) as well as basic nociceptive dysregulation. All of these variables, in turn, are often interdependent on one another so that one cannot simply treat one to the exclusion of the others. Therefore, the interdisciplinary pain management approach embraces the fact that comprehensive assessment-treatment of all these dimensions is essential in order to be effective. This is in keeping with the fact that there often is not a documentable, isomorphic relationship between a specific nociceptive event and pain (Gatchel et al., 2007). Instead, multiple other dimensions involving emotion, cognition, and behavioral and brain processing (i.e., total biopsychosocial functioning) must be carefully considered in order to maximize the probability of treatment success. We should also keep in mind that future breakthroughs in the understanding of such biopsychosocial mechanisms will hopefully lead to even greater understanding in the areas of etiology, assessment, treatment, and prevention of chronic pain. Moreover, the potential role of genetic factors in the development of chronic pain is also a promising new area of research that should provide even greater insights into the etiological mechanisms of pain that may actually account for individual differences in the pain experience and response to treatment.

20.6 Basic Competencies of the Clinician

There are some basic concepts of which a competent pain management clinician needs to be aware. The first is the fact that one needs to distinguish pain as a neurological event from pain perception. The neurological event is called *nociception*, which originates in pain receptors/

regions and then passes through nerve fibers and pathways to the central nervous system. *Pain perception* is the actual interpretation of the pain sensation by the patient. This is often a two-way pathway. That is to say, the perception of the nociceptive event can significantly influence one's emotional and behavioral response to it. The stress associated with the meaning of pain, in turn, can then have a significant effect on the original nociception by decreasing the pain threshold (as indicated earlier, increased anxiety can decrease pain threshold). Indeed, various pain syndromes can often lead to stressors and changes of lifestyle that most people find unpleasant at the very least.

Indeed, unplanned and unwanted lifestyle changes due to the onset and presence of pain can lead to significant stress, so patients may begin to feel even worse than they had anticipated, and the stress actually can interfere with physical recovery. As Gatchel and Oordt (2003) have noted, this can be explained in terms of a cycle in which pain and the changes that it brings lead to stress, which leads to increased pain, increased stress, and so on. In fact, many investigations have demonstrated that stress and anxiety significantly influence pain perception, with higher levels of stress or anxiety associated with higher levels of pain intensity (Cornwal & Doncleri, 1988). In addition, stress may activate biologic responses of the autonomic and musculoskeletal systems. Thus, for example, muscle spasms may occur along with anxiety accompanying tension headaches which can, in turn, produce even more pain and muscle tension, and so on. This *pain-stress cycle* can often be important to point out to patients (see ❯ Fig. 20.1).

As further delineated by Gatchel and Oordt (2003), approximately 80% of primary care visits are prompted by patients reporting pain symptoms. Gatchel (1996) had also earlier delineated the most common types of pain seen at primary care settings, which have also been the focus of epidemiological studies.

🔲 **Fig. 20.1**

The pain-stress cycle, emphasizing the interaction of stress-related issues and the actual pain problem. It is helpful to draw patients' attention to this cycle (From *Personality Characteristics of Patients with Pain* (p. 17) by R.J. Gatchel and J.N. Weisberg, 2000, Washington, DC: American Psychological Association. Copyright 2000 by American Psychological Association. Reprinted with permission from the author)
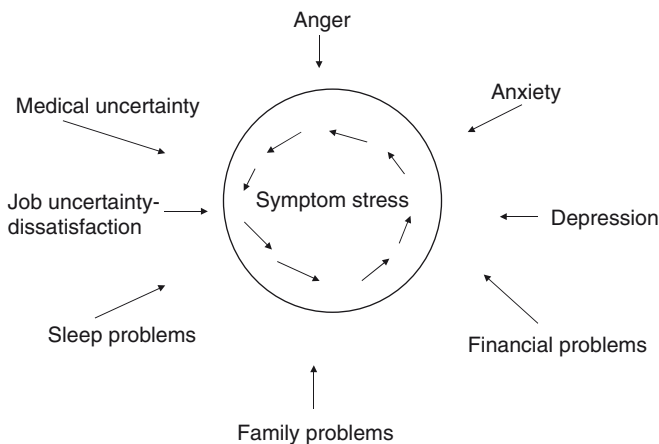
- *Abdominal pain* is most prevalent in women, and it decreases with age. Even though the rates are the lowest among the elderly population, elderly individuals make up the greatest percentage of people seeking care for abdominal pain.
- *Back pain* prevalence tends to rise in men up to age 50, and there do not appear to be any gender differences.
- *Headache* pain from migraine appears to have its higher prevalence among both men and women, ages 35 to 45. Moreover, the prevalence for women with migraine is higher at all ages, and the female-to-male ratio tends to increase with age from menarche to about 42 years, and then declines thereafter.
- *Joint pain* is usually age-specific, reflecting the degenerative changes that occur with aging. A high rate of age-related joint pain appears to occur in women, who experience a greater degree of degenerative changes than do men.
- *Chest pain* is a very common symptom associated with many disorders and diseases, including heart, lung, esophageal and panic disorders, to name just a few. Males and females appear to share rates for chest pain that change little with age.
- *Facial pain* is approximately twice as high in women, relative to men. It rises with age among women through their mid-40s, and then drops after age 65.
- *Fibromyalgia* is a diagnosis often made in patients with unexplained widespread pain. The main physical finding in making this diagnosis is the presence of "tender points" (i.e., tenderness at the bony insertions of certain tendons and muscles). Most patients also frequently complain of associated fatigue and sleep disturbances. This widespread pain appears to peak between the ages of 50 and 60, and it appears to be more prevalent in women than in men.

Finally, it should be understood that pain is usually broadly defined as *acute, chronic, or recurrent*, depending on the time course. This rather broad classification of pain duration is often used to better understand the biopsychosocial aspects that may be important when conducting assessment and treatment. For example, chronic pain is frequently the result of unresolved acute pain episodes, resulting in accumulative biopsychosocial effects such as prolonged physical deconditioning, stress, and depression. Obviously, this type of information can be extremely helpful in directing specific treatment approaches to the type of pain that is being evaluated.

20.7 Expert Competencies of the Clinician

Charlton, Gourlay, and Butler (2005), in coordination with the International Association for the Study of Pain, have delineated the important basic competencies that should be taught to pain assessment and management specialists (❯ Table 20.2). Further elucidation of these competencies can be found in Gatchel (2004).

20.8 Transition from Basic Competence to Expert

As repeatedly emphasized throughout this chapter, the interdisciplinary pain management program, based upon the biopsychosocial model of chronic pain, is the most treatment- and cost-effective approach for a clinician to use. Therefore, it is of utmost importance for a clinician's expert competency to thoroughly understand this basic approach. Fortunately, there are

■ **Table 20.2**

Important competencies that should be taught to pain assessment and management specialists

• Understand the distinction and interrelationship among chronic pain, impairment, disability, and incapacity for work
• Understand the different epidemiology of chronic pain, health-care usage, and associated disability and incapacity for work
• Understand the musculoskeletal, soft tissue, and neurophysiologic bases of chronic pain and the methods and limitations of assessing them clinically in the individual patient
• Understand the possible influence of workers' compensation and litigation on the clinical presentation, evaluation, and management outcomes of chronic pain
• Understand occupational health issues in chronic pain, disability, and (in)capacity for work. Understand the concepts, methods, and limitations of yellow flags, barriers to recovery, rehabilitation, and return-to-work interventions
• Understand the different disability systems and the different approaches to disability evaluation. Understand the need for a systematic approach to the assessment of disability and (in)capacity, the application of test results, and the preparation of a report directed to the particular referral question
• Understand the role and limitations of medical and psychological/psychiatric evidence in the workers' compensation, social security, and litigation systems
• Understand the concepts, methods, and limitations of assessing chronic pain clinically in the individual patient, including the American Medical Association Guides, 5th edition
• Understand the concepts, methods, and limitations of independent medical examinations
• Understand the concepts, methods, and limitations of functional capacity evaluations
• Understand the concepts, methods, and limitations of assessment of malingering, exaggeration, and credibility (including *Diagnostic and Statistical Manual of Mental Disorders* [1994] and World Health Organization definitions [1990])

now a number of resources that can be used to educate and orient clinicians to this approach. For example, Gatchel and Mayer (2008) have provided a thorough review of the basic functional restoration approach to chronic low back pain management, which can be generalized to chronic pain in general. In addition, there are a host of other publications that can be accessed (e.g., Deschner & Polatin, 2000; Feuerstein & Zostowny, 1996; Gatchel, 2004; Gatchel & Turk, 1999; Mayer & Gatchel, 1988; Mayer & Polatin, 2000; Robbins et al., 2003; Sanders, Harden, & Vicente, 2005). Of course, it is essential that, once one develops a working understanding of the basic components and workings of interdisciplinary pain management, then actual clinical experience in the area is required under appropriate supervision. Only tying the education with the clinical experience will yield an expert in the field of chronic pain management.

It should also be pointed out that cognitive-behavioral therapy (CBT) is often an important psychosocial component of interdisciplinary pain management programs, and, therefore, one should also develop competence in this widely used psychological treatment method. As recently noted by Gatchel and Rollings (2008), the major goal of CBT is to replace maladaptive patient coping skills, cognitions, emotions, and behaviors with more adaptive ones. However, from a biopsychosocial perspective, CBT alone does not address all the important variable potentially contributing to chronic pain (e.g., biological factors), but may improve care for patients with psychosocial comorbidities. Also, it should be pointed out that use of the term CBT can vary

widely, and may be used to note self-instructions (e.g., distraction, imagery, motivational self-talk), relaxation and/or biofeedback, development of adaptive coping skills (e.g., minimizing negative or self-defeating thoughts), changing maladaptive beliefs about pain and goal setting. Patients who are referred for CBT may be exposed to varying selections of these strategies, specifically tailored to their needs. There are a number of resources available that describe the fundamentals of CBT. One good resource, which takes the reader through a session-by-session of CBT for pain management, has been published by Gatchel and Robinson (2003). Again, though, one must remember that after learning the basic skills of CBT, supervised clinical training is essential for the most efficacious application of this treatment modality.

20.9 Summary

We have noted the high prevalence and cost of chronic pain, and the fact that it is a major physical and mental health-care problem in the United States. As a consequence, there is a great need for appropriately trained clinicians, both to assess and manage this large population. Fortunately, the biopsychosocial model of chronic pain has been shown to be the most widely accepted and heuristic perspective to understanding and treating chronic pain. Moreover, emanating from this biopsychosocial model, interdisciplinary pain management programs have been developed and shown to be both treatment- and cost-effective. This biopsychosocial model was reviewed as an essential underpinning of better recognizing symptoms of chronic pain, as well as their assessment. This biopsychosocial model uses physiologic, biologic, cognitive, emotional, behavioral, and social factors (as well as their interplay) when explaining a patient's report of pain. Indeed, in order to comprehensively assess chronic pain, one must be certain to account for such potential interactions before prescribing the best treatment regimen, which must also be individually tailored for a particular patient. Indeed, there are many individual differences in how people respond in the face of nociception, and variation in the methods used to understand and interpret the painful stimuli. As noted, this makes the experience of pain dependent on *cognitive-evaluative processes* and on *affective-motivational processes*. Both these processes were comprehensively reviewed. Finally, we also highlighted the fact that there is often significant comorbidity of chronic pain and psychiatric disorders. Therefore, psychiatric disorders must be managed, along with the chronic pain symptomatology.

We again highlighted the fact that there can be no doubt that the most cost- and treatment-effective approach to the treatment of chronic pain is interdisciplinary pain management programs. This conclusion is based on a great deal of evidence-based scientific data published in the scientific literature. A review of the core ingredients of these interdisciplinary/comprehensive pain management programs was provided. Moreover, because the biopsychosocial model of chronic pain was responsible for stimulating the development of comprehensive interdisciplinary pain management programs, the underlying mechanisms of dealing with the often complex interrelationships among physiological, psychological, and social factors that are involved in the development and maintenance of chronic pain were reviewed. Finally, the following important areas were discussed: the basic concepts of which a competent pain management clinician needs to be aware; the important concepts that need to be taught in order for the clinician to develop expert competency in the area; and the transition process with which clinicians must be involved in developing basic competency to becoming expert in the area.

It was repeatedly emphasized that these clinicians must not only learn the basic core components of this biopsychosocial model and the interdisciplinary pain management programs, but also must receive appropriate clinical training and supervision by other experts in the field before becoming accomplished independent clinicians in their own right.

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Volume III
Intervention and Treatment for Children and Adolescents

1 Major Depression

John F. Curry · Mark A. Reinecke

Abstract: Major Depressive Disorder (MDD) is one of the more frequent disorders of adolescence and also occurs among children. In addition to the character and fitness necessary for any clinical work, clinicians who work with depressed adolescents must be competent in the areas of knowledge, assessment and treatment for this disorder. We describe basic and advanced competencies across these domains. Currently there are two evidence-based psychological interventions for adolescent depression, Interpersonal Psychotherapy and Cognitive Behavior Therapy. Basic competencies include knowledge of these interventions, of their evidence-base, and of their limitations. Associated basic assessment competencies include the skills required to conduct assessments to determine accurate diagnosis, to take into account possible co-occurring disorders, and to formulate an effective treatment plan. As clinicians move from more basic to more advanced competencies, they develop knowledge of more severe forms and possible developmental outcomes of mood disorders, including psychotic and bipolar disorders, of the diagnosis and treatment of frequent comorbid combinations, such as depression and substance abuse, and of more intensive or complex treatments, such as combined psychotherapy and medication and of inpatient care for suicidal adolescents. Within evidence-based psychotherapies, there is also a continuum of competencies, as more advanced clinicians develop a deeper understanding of and application of the treatment model, and conduct sessions that indicate an integration of the treatment model, the needs of the adolescent and the ongoing therapeutic alliance.

1.1 Overview

For many years, depression was considered a condition that affected only adults. Over the past 30 years, however, there has been a recognition that the major affective disorders occur during childhood and adolescence, are persistent, and are associated with a wide range of negative outcomes. Experiencing a major depressive episode (MDE) during childhood or adolescence places an individual at risk of depression as an adult (Kessler & Walters, 1998). Developmental continuities or trajectories appear to exist in those individuals who experience an episode of major depression as a child and are more likely to experience further episodes as an adolescent (Kovacs & Gatsonis, 1994). Clinically depressed adolescents, in turn, are more likely to experience depressive episodes as an adult (Fombonne, Wostear, Cooper, Harrington, & Rutter, 2001). Major depression among youth can have a severe impact on social relationships and academic functioning, and can place youth at risk of other psychiatric conditions, alcohol and substance abuse, and suicide (Angold, Costello, & Erkanli, 1999; Brent, 1995). Major depression among youth, then, is a significant clinical and public health concern, and it is important for clinical psychologists who work with adolescents to develop the necessary competencies to provide high quality care.

1.2　Recognition of Symptoms and Their Assessment

Major Depressive Disorder (MDD) is marked by one or more MDEs in the absence of manic or hypomanic episodes. MDEs during childhood and adolescence are phenomenologically similar to those experienced by adults. DSM-IV-TR criteria for major depression during childhood and adolescence are very similar to those for adults (American Psychiatric Association, 2000), with the few exceptions noted below in italics. To meet criteria for MDE, a child or adolescent must manifest five or more of the following symptoms for most of the day, nearly every day, for at least a 2-week period: (1) depressed *or irritable* mood, (2) markedly diminished interest or pleasure in activities, (3) significant weight loss or gain, or a change in appetite *or failure to make expected weight gains*, (4) sleep disturbance, (5) psychomotor agitation or retardation, (6) fatigue or loss of energy, (7) feelings of guilt or worthlessness, (8) indecisiveness or inability to concentrate, or (9) recurrent thoughts of death or suicide, or a suicide attempt. Either the depressed or irritable mood, or anhedonia, must be present. Moreover, these symptoms must cause significant impairment in academic or psychosocial functioning and cannot be due to the direct effects of substance abuse or a general medical condition. As with adults, then, major depression during childhood is characterized by affective, cognitive, and somatic changes.

Epidemiological research indicates that the first onset of MDD frequently occurs during adolescence, and that the condition is not uncommon among prepubertal youth. Across a number of studies, approximately 5–8% of adolescents (Essau & Dobson, 1999; Kessler, Avenevoli, & Merikangas, 2001) meet diagnostic criteria for MDD. A recent meta-analysis generated estimated point prevalence rates of 2.8% for childhood MDD, and 5.9% for girls and 4.6% for boys for adolescent MDD (Costello, Erkanli, & Angold, 2006).

Major depression frequently co-occurs with other psychiatric illnesses (Angold et al., 1999), which can complicate diagnosis, case formulation, and treatment planning. Both internalizing and externalizing behavior problems can co-occur with depression among youth. Of these, anxiety disorders are the most common, with over 50% of clinically depressed adolescents reporting a *current or past* history of anxiety (Pine, Cohen, Gurley, Brook, & Ma, 1998). In the Treatment for Adolescents with Depression Study, 27% of the participants also met DSM-IV-TR criteria for a current anxiety disorder (TADS Team, 2005). Twenty-four percent of the sample met diagnostic criteria for a current externalizing disorder. Given these complexities, a principal competency of the clinician is that of accurate diagnosis, including differential diagnosis and comprehensive assessment of comorbid disorders.

As noted, rates of MDD among prebubertal youth are relatively low. Childhood MDD tends to occur equally in boys and girls. Rates of depression among males and females diverge during adolescence, with females meeting the criteria for major depression about twice as frequently as males. Depression among youth has a highly variable course (Lewinsohn, Clarke, Seeley, & Rohde, 1994), but both chronicity and recurrence are frequent (Reinecke & Curry, 2008). In Lewinsohn's study of a high school sample, duration of MDE ranged from 2 to 520 weeks! Clinical samples, not surprisingly, demonstrate considerable duration. The median duration of depressive episodes among youth entering the Treatment for Adolescents with Depression Study (TADS) was 40 weeks, and the mean was 71 weeks (TADS Team, 2005). Depression among adolescents also tends to be recurrent.

Rao et al. (1995) reported a 7-year recurrence rate (i.e., emergence of depressive symptoms after a period of sustained recovery from a depressive episode) of approximately 70% in their clinical sample of depressed youth.

1.3 Maintenance Factors of the Disorder

MDD among adolescents, like other psychiatric disorders, appears to be multiply determined. A range of biological, social, environmental, developmental, and cognitive factors appear to interact in placing individuals at risk (Gotlib & Hammen, 1992; Kendler, Gardner, & Prescott, 2002). Contemporary models of psychopathology, including interpersonal and cognitive behavioral models discussed below, typically take the form of diathesis-stress formulations in which vulnerabilities interact with the occurrence of social or environmental stressors in contributing to the onset of a depressive episode. From this perspective, it is unlikely that any single factor (biological, social, etc.) will account for a very large portion of the variance in predicting the onset of MDD. Rather, these factors appear to influence one another in a transactional manner over the course of development in placing youth at risk. These models are consistent, as well, with recent models of gene–environment interaction in developmental psychopathology (Moffitt, Caspi, & Rutter, 2006).

Some vulnerability factors, such as biological vulnerability and past developmental history, are beyond the scope of psychotherapeutic intervention, i.e., they cannot be changed by psychotherapeutic treatment. Others, however, can be identified as targets of treatment. Those vulnerability factors that are currently serving to maintain a depressive episode, and that are modifiable by psychological intervention serve as targets for evidence-based psychotherapies.

In the psychotherapeutic treatment of adolescent depression, clinicians must recognize that both individual and family factors might contribute to or maintain the disorder. The specific focus of treatment will be driven both by the clinician's theoretical orientation (e.g., cognitive behavioral or interpersonal) and the salient maintaining factors in a given case. Psychological maintenance factors can be categorized as cognitive, behavioral, and interpersonal/family factors, any of which can interfere with the adolescent's ability to cope effectively with stress, and thus maintain the depressive condition.

Cognitive Factors. A variety of cognitive correlates of adolescent depression has been identified in psychopathology research guided by social cognitive learning theory or cognitive processing theory. In the classic cognitive theory of depression (Beck, Rush, Shaw, & Emery, 1979), cognitive processes at different levels of awareness are proposed as contributing to depression. At the most superficial level of cognition, *automatic thoughts* are proposed as rapid ideas, reactions, or images triggered by certain situations. For example, an adolescent boy who fails a math test may experience the thought "I am dumb." Automatic thoughts are related to underlying *dysfunctional attitudes* or conditional beliefs, such as "Unless I am an excellent student, I am incompetent." At the most fundamental level of cognition are the adolescent's *core beliefs*, such as "I am worthless." Negative beliefs may pertain to the self, the world, or the future (Kaslow, Stark, Printz, Livingston, & Tsai, 1992). Cognitive therapy proceeds from the identification of automatic thoughts to that of their underlying attitudes and core beliefs, with the therapist assisting the patient to restructure cognitions at each level.

As treatment proceeds along this path, the adolescent's typically used *cognitive distortions* will be identified, such as failure to process positive feedback, dichotomous (all/none, good/bad) thinking, or overgeneralization. By collaboratively identifying and challenging these information processing distortions, the therapist and adolescent increase the adolescent's openness to information that serves to disconfirm depressive beliefs, thus alleviating depression.

Additional cognitive maintenance factors have been identified by other models of depression, and shown to be associated with depression. For example, Abramson, Seligman, and Teasdale (1978) demonstrated that depressed individuals attribute negative outcomes to internal, stable, global causes ("It is my fault that we lost"; "I will never be any good at this game"; "I am not good at anything."), a feature that is characterized as a depressive *explanatory style*. On the other hand, they tend to attribute positive outcomes to external, unstable, and specific causes ("I aced the test because it was easy"; "I had a good day"; "I can do long division, but not other math."). Whereas attributions pertain to judgments about events that have already occurred, expectancies pertain to future events. Studies have demonstrated that *hopelessness*, or negative expectancies about the future, characterize depressed adolescents (e.g., Garber, Weiss, & Shanley, 1993).

A recent review article summarized the evidence in support of the association of these cognitive variables and youth depression (Ingram, Nelson, Steidtmann, & Bistricky, 2007). Measures exist for the assessment of each variable, facilitating the clinician's ability to target relevant processes in specific cases.

Behavioral Factors. Research based on operant or multifactorial models of depression has emphasized the importance of social withdrawal or general inactivity to the maintenance of depression (Clarke, DeBar, & Lewinsohn, 2003). By avoiding potentially gratifying mastery activities and social interaction, depressed adolescents deprive themselves of pleasure, or positive reinforcement that can counter depressed mood or anhedonia. In addition, depressed adolescents tend to engage in more unpleasant activities than do nondepressed adolescents (Carey, Kelley, Buss, & Scott, 1986).

Interpersonal and Family Factors. Interpersonal problem-solving deficits have been identified in some studies of depressed adolescents, particularly suicidal depressed adolescents (Speckens & Hawton, 2005). Such deficits can prevent resolution of interpersonal conflicts that are, themselves, quite normal for adolescents. Interpersonal loss can be another factor contributing to or maintaining adolescent depression. Bereavement following parental death has been found to be associated with increased psychiatric symptomatology in the first 2 years following death, with complex bereavement (parental death and additional stressors) more likely to be associated with depression (Cerel, Fristad, Verducci, Weller, & Weller, 2006). Loss of relatives or close friends has been associated with elevated depressive symptoms (Harrington & Harrington, 2001). Adolescents can experience traumatic grief reactions to the death of a peer by suicide, which in turn predicts subsequent depression (Melhem et al., 2004).

Additional family factors that can maintain adolescent depression include excessively high parental expectations of the adolescent, coupled with low levels of praise or positive reinforcement (Cole & Rehm, 1986), poor family problem-solving, negative parent–adolescent affect, or high parent–adolescent conflict and mutual criticism (Asarnow, Tompson, Hamilton, Goldstein, & Guthrie, 1994; Ge, Best, Conger, & Simons, 1996; Sheeber, Davis, Leve, Hops, & Tildesley, 2007).

1.4 Evidence-Based Treatment Approaches

Several approaches have been piloted as treatments for adolescent depression (e.g., attachment-based family therapy; Diamond, Reis, Diamond, Siqueland, & Isaacs, 2002). To date, two approaches to the psychotherapeutic treatment of adolescent depression have garnered a substantial evidence base: cognitive behavior therapy (CBT) and interpersonal psychotherapy (IPT). The evidence base in support of CBT is more extensive than that in support of IPT, and CBT is the only psychotherapy that has been tested in multisite adolescent depression trials. We review IPT first, and then CBT.

Mufson and her colleagues adapted IPT for depressed adolescents and completed the initial efficacy trial of this treatment with 48 mostly Hispanic female subjects (Mufson, Weissman, Moreau, & Garfinkel, 1999). Compared to a clinical monitoring condition, 12 weeks of IPT led to greater reductions in interviewer-rated depression, self-reported depression, and remission from the episode of MDD. A larger school-based study was subsequently completed (Mufson et al., 2004), in which IPT was compared to usual treatment in school-based clinics. Sixty-three adolescents with MDD, or other depressive diagnoses, across five schools, were randomized to one of the two conditions. IPT surpassed usual treatment on interview-based and self-reported depression, and on global functioning at outcome.

Rossello and Bernal (1999) applied a somewhat different version of IPT with 71 Puerto Rican adolescents with MDD. Adolescents were randomized to IPT, CBT, or a Wait List (WL). After 12 weeks of treatment, those receiving either IPT or CBT reported significantly less depression than those in the WL condition. IPT, but not CBT, surpassed WL on measures of self-esteem and social adaptation.

In summary, IPT has been demonstrated to be more effective acutely for adolescent depression than WL, clinical monitoring, or standard school-based counseling. It has not yet been compared to pill placebo, or compared to, or combined with, medication in controlled trials.

Based on Beck's cognitive processing model of depression, Brent et al. (1997) at the University of Pittsburgh conducted a single-site comparison of CBT, nondirective supportive therapy (NST), and systems behavioral family therapy (SBFT) for adolescents with MDD(Brent et al.). All treatments included psychoeducation for parents regarding the nature of depression and available treatments. CBT was adapted for adolescents by increasing the emphasis on interpersonal problem-solving and social skills training, and including a component to enhance adolescent affect regulation. Treatment sessions were held weekly for 12–16 weeks across conditions. Positive response to treatment was defined as absence of significant MDD symptoms on a diagnostic interview along with at least 3 consecutive weeks of normal scores on self-reported depression. CBT was more effective than either of the comparison conditions, led to faster time to response, and was rated as a more credible intervention by parents.

During treatment, CBT had a significantly greater impact on reducing cognitive distortions than did either of the other psychotherapies, a finding maintained at the 2-year follow-up. SBFT had more impact on the measure of family functioning. By contrast, there was no difference among treatments in their impact on hopelessness (Kolko, Brent, Baugher, Bridge, & Birmaher, 2000). At the 2-year follow-up, the great majority of adolescents (80%) had responded and there were no longer differences in outcome across treatment groups (Birmaher et al., 2000). This finding is likely related to the nature of depression as an episodic disorder, and suggests that the advantage of CBT lies in its facilitation of a more rapid response than is attained by less

depression-specific psychotherapies. Conversely, 30% experienced a recurrence of MDD during the 2-year period, pointing to the importance of relapse prevention as a treatment target.

A second approach to CBT for adolescent depression has been based upon Lewinsohn's multifactorial model of MDD, which identifies multiple biological, cognitive, and behavioral factors contributing to MDD (Clarke, Lewinsohn, & Hops, 1990). In this model, the same priority is not accorded to cognition as in the Beck model. Instead, the underlying assumption is that cognition, behavior, and emotion are mutually influencing factors, so that change in either behavior or cognition can lead to modifications in emotion and reduction in depression. Treatment stemming from this model is psychoeducational in nature, administered in highly structured groups, and focused on the learning of a wide variety of skills. These include mood monitoring, goal-setting, problem-solving, relaxation, increasing involvement in pleasant activities, and cognitive restructuring. The intervention is presented as a course, with sessions usually held in nonclinic sites, and the program is entitled the Adolescent Coping with Depression Course (CWD-A).

Two randomized trials have assessed the effectiveness of CWD-A, the second of which was a two-site study. In each study, three conditions were contrasted. One third of adolescents were randomized to CWD-A alone; one third to CWD-A plus a parallel psychoeducation group for their parents; and one third to a WL. Treatment response was defined as no longer meeting the criteria for a depression diagnosis. In both studies, response was greater in the two CBT conditions than in the WL group. Of note is the fact that the absolute response rates varied greatly between studies. In the initial study of 59 subjects (Lewinsohn, Clarke, Hops, & Andrews, 1990), response to CWD-A was 43% without concurrent parent group and 48% with concurrent parent group, as opposed to only 5% in the WL condition. Parallel rates in the second study (Clarke, Rohde, Lewinsohn, Hops, & Seeley, 1999), with 123 subjects, were 65%, 69%, and 48%. Follow-up of the initial study cohort showed that 82% had responded by 6 months, indicating, as in Brent et al.'s (1997) study that improvement continues following acute treatment. Also, similar to Brent's findings, after the second CWD-A study, follow-up indicated a 25% recurrence rate over a 2-year period.

A recent application of the CWD-A compared it to a life skill (LS) condition for adolescents with comorbid MDD and conduct disorder (Rohde, Clarke, Mace, Jorgensen, & Seeley, 2004). Adolescents treated with CWD-A had higher recovery rates than those treated with LS (39% versus 19%), but, as would be expected with this significant comorbid condition, absolute response rates were lower than in the initial CWD-A studies.

Two major multisite studies of CBT for adolescent MDD have now been conducted in the USA. In the 13-site TADS, 439 adolescents with moderate to severe MDD were randomized to receive CBT, fluoxetine, their combination, or clinical management with pill placebo for 12 weeks of acute treatment. After week 12, the placebo arm was discontinued and placebo nonresponders received their treatment of choice. Partial or full responders to the active treatments continued to receive treatment for 6 weeks in continuation and then 18 weeks of maintenance therapy in their assigned arms. CBT in TADS combined elements of the Brent and Lewinsohn/Clark models: Behavioral and cognitive skills training was embedded within the individual therapy sessions (Curry et al., 2000; Wells & Curry, 2000). Parents were included in some treatment sessions. Core elements of the CBT included mood monitoring, goal-setting, behavioral activation, problem-solving, and cognitive restructuring. The TADS CBT model has been described extensively in a special issue of *Cognitive & Behavioral Practice* (Vol. 12, No. 2, 2005). The primary hypotheses of the TADS study were that the

combination of CBT and fluoxetine would be more effective than either monotherapy, and that each of the latter would surpass placebo acutely.

Acute treatment results supported combined CBT + fluoxetine as the most effective intervention, as measured by the rate of change (slope) of scores on a standardized interview-based rating scale completed by Independent Evaluators uninformed of treatment assignment (TADS Team, 2004). Combined treatment surpassed placebo, CBT alone, and fluoxetine alone on this primary measure. Response rates at week 12 were 71% for combined treatment, 61% for fluoxetine, 43% for CBT, and 34% for placebo. Fluoxetine, but not CBT, was superior to PBO at the end of 12 weeks of treatment. By week 18, response rates for CBT and placebo were equivalent (69% and 65%, respectively), and at the week 36 treatment endpoint, all three active treatments converged with rates of 86%, 81%, and 81% for combination, fluoxetine, and CBT, respectively (TADS Team, 2007).

In the six-site Treatment of Resistant Depression in Adolescents (TORDIA) study, 334 adolescents who had not responded to an adequate trial of a selective serotonin reuptake inhibitor (SSRI; antidepressant medication) were randomized to one of four conditions. They were switched either to another SSRI or venlafaxine, with or without concurrent CBT. CBT with a medication switch proved more effective than a medication switch alone, with 55% responding in the CBT-containing conditions versus 40% without CBT (Brent et al., 2008). In summary, CBT has been shown to be more effective acutely than WL, and alternative psychotherapies, but not to pill placebo acutely. The combination of CBT and fluoxetine has attained a higher absolute response rate than either of these single interventions for acute treatment of MDD, and surpassed medication alone as a second stage treatment following nonresponse to initial medication. However, a British study found that CBT did not add to the efficacy of antidepressant medication for adolescents not responding to initial psychosocial intervention (Goodyer et al., 2007).

1.5   Mechanisms of Change Underlying the Interventions

Only a limited amount of empirical evidence exists regarding the mechanisms of change associated with the efficacy of CBT or IPT for adolescent depression. We review that evidence below, following a discussion of theoretically proposed mechanisms of change. IPT is based on the assumptions that clinical depression is a psychiatric disorder manifested in specific symptoms, and that it may be either a cause or an effect of disturbances in current interpersonal relationships (Klerman, Weissman, Rounsaville, & Chevron, 1984). Treatment proceeds in three phases. Initially the therapist reviews the patient's symptoms, identifies the depressive syndrome as a disorder, explains the interpersonal model of depression and treatment, and assesses the need for antidepressant medication. An inventory of past and current interpersonal relationships is conducted, and the current depression is linked to a major interpersonal problem area. Patient and therapist work together to formulate goals, with a focus of work primarily on one interpersonal problem area.

The second phase of treatment constitutes the majority of sessions. One of the four possible major problem areas is the focus of these sessions: grief, interpersonal disputes, role transitions, or interpersonal deficits. The final phase of treatment is termination, which is discussed openly and viewed as a type of grieving, in itself. During IPT sessions, the therapist encourages the patient to explore and express emotions, especially in the context of the problem area that

is the focus of treatment. There are emphases on clarification of communication and the IPT therapist may also incorporate social skills or interpersonal problem-solving skills into sessions. To this extent, there is a clear overlap between IPT and CBT. In the course of the treatment, the patient is assisted to resolve the key interpersonal problem that appears to be most clearly associated with the onset and/or maintenance of the current depressive episode.

For example, an adolescent girl may experience the onset of depression following the death of her father. This would clearly determine the focus of IPT on the major problem area of grief. During the initial treatment phase, the onset of depressive disorder would be linked to the loss of the adolescent's father. In the middle phase sessions, the girl would be assisted to review her relationship with her father, both in its positive and negative aspects, exploring all associated emotions. As the mourning process proceeds, the adolescent is encouraged to become interested in other relationships and activities or social interactions that can, to some extent, substitute for the loss of the parent.

A different example would be that of an adolescent who experiences the onset of depression after making a transition from middle to high school. This is an instance or "role transition." It is analogous to a grief reaction, however, in that the focus of treatment would be on mourning the loss of the old role, partly by reviewing both its positive and negative aspects, and then moving toward adoption of a new role. Inherent in the latter may be the need to develop more advanced social or academic skills required for mastery in the new situation.

These examples illustrate the centrality of the interpersonal context of depression that characterizes IPT. It appears that the proposed core mechanism of change underlying IPT is the resolution of the most salient interpersonal problem associated with the onset or maintenance of the current depressive episode. IPT is a short-term treatment and does not seek to restructure personality or rework relationships from the past as these may be internalized in object relations or schemas.

As noted above, American CBT for adolescent depression has stemmed from two different schools of thought: the cognitive model of psychopathology and the multifactorial model. As such, there are some differences in proposed mechanisms of change. The cognitive model hypothesizes that depression is a cognitive disorder (Beck et al., 1979). Negative life events trigger underlying cognitive diatheses or vulnerabilities that may stem from early life experiences, such as a core belief that the self is unlovable or helpless. Cognitive therapy for adolescent depression, like IPT, begins with an assessment of symptoms and the description of the depressive syndrome as a disorder (Brent & Poling, 1997). The adolescent and family receive psychoeducation about depression and about the treatment. In the early phase of treatment, the adolescent is asked to attend to events or situations that affect his or her mood (mood monitoring), and may be helped to engage in an increased level of activities, not only to counter depressive passivity, but also to create more opportunities to monitor mood and associated cognitions. Within sessions, here-and-now focusing on subtle shifts in mood is facilitated by the therapist, to help the adolescent identify what thoughts or images are going through his or her mind as mood shifts occur. In general, cognitive therapy proceeds from identification of automatic thoughts associated with depressive affect to the identification of underlying conditional beliefs (dysfunctional attitudes) and to that of depressive core beliefs. Themes in the automatic thoughts tend to disclose the nature of the relevant underlying attitudes and beliefs.

For example, an adolescent boy may become depressed after breaking up with his girlfriend. Associated automatic thoughts may be: "She thinks I am unattractive"; or "She likes my best friend better than me." By rigidly focusing on the breakup, the boy may be demonstrating

an underlying dysfunctional attitude such as, "Unless every girl finds me attractive, I am a loser." The associated core belief may be, "I am unlovable." To maintain such a belief, the adolescent relies on cognitive distortions, such as ignoring the fact that another girl seems to like him, or overgeneralizing from this one negative experience to form an expectation that all romantic relationships will end in painful separation. The proposed key mechanism of change in cognitive therapy is modification of depressive automatic thoughts, dysfunctional attitudes, and core beliefs, and ultimately the latter. Thus, cognitive restructuring is the major therapeutic mechanism of change.

Multifactorial CBT (Clarke et al., 2003) is less linear in its assumptions and uses a reciprocal influence model of depression, according to which deficits in behaviors, cognitions, or emotional coping responses can be associated with the onset and maintenance of depression in any given case. Treatment proceeds, therefore, by presenting to adolescents an array of skills to learn for coping with stress. Since treatment is psychoeducational and often done in a group format, the assumption appears to be that some skills will be relevant for a given adolescent, while other skills will be relevant for another adolescent. There is a greater emphasis in multifactorial CBT on behavioral activation as an end in itself, and not only as a means to generate depressive cognitions for subsequent restructuring. Thus, the CWD-A program puts considerable emphasis on monitoring mood while increasing weekly pleasant activities, in order to show the link between pleasant activities of a social or achievement nature with elevations in mood.

To our knowledge, there have not been any empirical studies of the mechanisms of change associated with effective IPT for adolescents. There have been only a few relevant studies of CBT. In a small study of 22 adolescents with depressive symptoms (not diagnosed MDD), Ackerson, Scogin, McKendra-Smith, & Lyman (1998) found that reductions in dysfunctional attitudes mediated response to a bibliotherapeutic intervention based on cognitive theory. Kaufman, Rhode, Seeley, Clarke, & Stice (2005) conducted a mediation analysis of the sample included in Rohde et al.'s (2004) study of CBT or life skills training for depressed, conduct-disordered adolescents. They found that changes in negative automatic thoughts mediated the outcome of CBT on depression. Thus, there is some evidence that a key mechanism of change in CBT for adolescent depression is the restructuring of depressive cognitions.

1.6   Basic Competencies of the Clinician

Clinical psychologists who propose to work with depressed adolescents must have relevant competencies in knowledge, assessment, and treatment. A framework for conceptualizing these professional psychology competencies, in general and not with specific reference to adolescent depression, was generated by a large conference work group in 2002, and we will rely to some extent on that framework in the discussion of this topic (Collins, Kaslow, & Illfelder-Kaye, 2004). In addition, the most fundamental competencies for psychological practice with children, adolescents, or adults involve aspects of personal character and psychological fitness that are essential for clinical effectiveness (Johnson & Campbell, 2004).

Johnson and Campbell (2004) argue that character and fitness are necessary but not sufficient personal characteristics for competence in professional psychology. Under the rubric of character, they include honesty and integrity in one's dealings with other persons. More specifically, clinicians must have the personal qualities of integrity (honesty and consistency across contexts), prudence (capacity for planning and good judgment), and caring (concern for the

welfare and needs of others) (p. 406). Under psychological fitness, they refer to emotional stability, absence of serious psychological disorder, benign personality adjustment, and absence of substance abuse. In a survey of the Directors of Clinical/Counseling Training (DCT's), they found that such character and fitness markers were ranked as quite important, both for admission to graduate school, and even more so for graduation from doctoral training.

How do these character and fitness requirements pertain to clinical work with depressed adolescents? First, honesty and consistency across contexts are necessary in order to establish good working alliances both with the adolescent and with the parent(s). Research by Hawley and Weisz (2005) has shown that a positive therapeutic alliance with the adolescent or child is associated with better treatment outcome, and that a positive alliance with the parent is associated with retention in treatment and regular attendance at sessions. In adolescent depression work, it is critical that the adolescent and parents be aware of the parameters of treatment, including confidentiality limits, child abuse reporting requirements, and steps that will be taken in the event of worsening suicidal ideation or a suicide attempt. There is a risk of the therapist identifying either with the adolescent or the parents, instead of forming a clear working alliance with both. Identification with the adolescent can lead therapists to offer excessive guarantees of confidentiality, which then serve to trap them when dangerous information is disclosed by the adolescent. Identification with the parents can lead therapists to transform treatment into socialization, by trying to obtain the outcome parents wish for, rather than the outcome most appropriate for the adolescent. For example, depression may be associated with excessive parental expectations for academic achievement. Therapists who identify with parents will be inhibited from confronting this parental pressure, a step essential to the recovery of the adolescent.

Honesty and consistency across contexts require that the therapist begins treatment with a clear contract about whether and when parents will be expected to attend sessions or parts of the sessions, how parents will be informed of the adolescent's progress, or lack thereof, what level of detail from adolescent sessions will be shared by the therapist with the parents, and how out-of-session contacts (e.g., phone calls or e-mails) from the parents will be shared with the adolescent. Limits of confidentiality must be clarified at the outset of treatment. In general, the adolescent needs to know that increased suicidal risk, any homicidal ideation or threats, incidents of possible physical or sexual abuse, and medical emergencies will be disclosed to relevant authorities and/or parents. As for adolescent substance use, it is important for the therapist to have a clear position on disclosure to parents that is consistent with state law and acceptable both to the adolescent and the parents. The key principle in all of these matters is that the therapist must be clear and consistent with all parties so that trust is created and maintained.

Prudence, or capacity for planning and good judgment, will inevitably be required in working with depressed adolescents. One element of prudence is the capacity to develop, monitor, and modify the initial treatment plan, about which more will be said, below. Prior to the start of treatment, the clinician must use prudence to address these key questions:

1. Is this adolescent a suitable candidate for outpatient psychotherapy? Adolescents who are either experiencing merely a normal mood variation of mild severity or brief duration might benefit more from reassurance and "watchful waiting" than from the immediate implementation of a course of treatment. On the other hand, those with severe and/or persistent depression need to be evaluated for possible medication treatment. Those with

complex comorbid conditions, such as substance abuse or serious conduct disorder, will likely need more than simply weekly outpatient psychotherapy.

2. Is this adolescent's family likely to be able to support outpatient psychotherapy for the adolescent? "Family" here is broadly construed to mean the adolescent's immediate support system, including the adolescent's living situation, and is not restricted to nuclear or biological family. Some adolescents living in group homes, for example, will be fully supported in the practical matters of attending psychotherapy sessions, whereas others in chaotic, disorganized nuclear families or those who are homeless may lack such support. Given that evidence-based forms of psychotherapy for adolescent depression are intended to last for 3–4 months, an adolescent who is unlikely to be able to attend even a significant proportion of the sessions may not be suitable for such intervention. Alternative interventions, such as as-needed crisis management, school-based counseling, or involvement in other school-based activities may be of more benefit to such adolescents.

3. If the adolescent does appear to be a reasonable candidate for outpatient psychotherapy, which psychotherapy should be initiated? To date there are two forms of psychotherapy with empirical support in the treatment of adolescent depression: IPT and CBT. The choice of which to implement will depend primarily on the expertise of the therapist.

Caring, or concern for the well-being of the other, is clearly essential for working with depressed adolescents. The therapist must be willing to tolerate the pessimism and even hopelessness that some depressed adolescents express without becoming immobilized by them. Beck et al. (1979) wrote eloquently of the risk that the therapist will "buy into" the depressed patient's negative views of self, world, or future by abandoning the role of a scientific observer and the task of collaborative empiricism (p. 59). Again, this points to the difference between caring for the well-being of the depressed patient and identifying with the patient's depressive world view. Some depressed adolescents have experienced exceptionally negative life experiences or are currently living in extremely negative situations. For example, one of us worked with a boy who had lost both parents to AIDS and was now living with a rejecting stepmother. In the face of such adversity, the therapist needs to maintain a caring and hopeful stance, seeking to apply the treatment model, augmented if necessary by environmental modifications, to help the adolescent reduce depression and establish sources of hope.

Therapists who work with depressed adolescents must also be emotionally healthy, themselves. If the therapist is in significant distress due to current life circumstances, longer-standing personality disturbances, psychopathology or substance abuse, such work is seriously contraindicated. As is the case in all types of psychotherapy, the therapist needs to have his or her own emotional needs met elsewhere, and not seek to meet them through the treatment.

1.6.1 Basic Knowledge Competencies

Clinical psychology is grounded in psychological science, and the "scientifically minded" practitioner is an intended outcome of all accredited doctoral training programs, whatever the specific training model of the program might be (scientist-practitioner, practitioner-scientist, clinical scientist, local clinical scientist) (Belar & Perry, 1992; Bieschke, Fouad, Collins, & Halonen, 2004). Bieschke et al. delineated five components of scientifically minded practice in professional psychology, the first of which is the ability to access and apply current scientific

knowledge habitually and appropriately. What does this competence imply with regard to clinical work with depressed adolescents?

First, a basic knowledge competence is to be cognizant of the contemporary theories and their evidence regarding the psychopathology of depression in adolescents. This includes the kind of material that would be included in the doctoral-level courses in psychopathology, especially developmental psychopathology. Familiarity with biological, cognitive, behavioral, social learning, and interpersonal (including family) models of depressive psychopathology would constitute required knowledge.

Second, a basic knowledge competence includes awareness of current evidence-based interventions for adolescent MDD, as reviewed above. It is incumbent on psychologists to know the essential outcome of major treatment studies, the limitations of those studies, and also to be aware of the lack of evidence supporting nonscience-based interventions.

Third, a basic knowledge competence is facility in the process of reviewing emerging knowledge on adolescent depression. It is extremely unlikely that the practitioner's graduate school knowledge will remain current after more than 5 or 7 years. As new knowledge develops, the practitioner needs to have the skills to locate and obtain updated sources of knowledge. Bieschke et al. (2004) argue that clinicians need to adopt an evidence-based practice approach and make use of systematic review papers, meta-analyses of treatment outcome studies, and reviews of randomized controlled trials, as sources of continuing education. Training in the requisite computer and data searching skills should be obtained during graduate school, although these, too, will need to be revised as methods of data reporting, collection, and dissemination are modified over time.

1.6.2 Basic Assessment Competencies

As Mash and Hunsley (2005, p. 362) noted, "[i]t would be difficult to imagine providing any form of psychological services to children and families without using some type of informal or formal assessment." Assessment is central to our work as clinicians – it guides the selection of problems to be addressed, provides a foundation for case formulations and treatment planning, and allows us to determine if what we are doing is doing any good. In a very real sense, the development and application of tests and measures is central to the identity of clinical psychology. It is a defining characteristic of the profession. With this in mind, care must be taken to insure the utility and integrity of our assessments, and to demonstrate that they contribute to improved care and enhanced outcomes. There are number of essential tasks which must be accomplished when working with depressed adolescents. These include: (1) making the right diagnosis, (2) attending to comorbid psychiatric and medical illnesses, (3) assessing symptom severity and monitoring treatment gains, (4) understanding the home and school environments in which the teen is functioning, and the ways these may be exacerbating or maintaining their distress, and (5) monitoring suicidal risk. Each of these tasks requires a specific set of skills, and can be facilitated by the use of psychometrically strong assessment instruments. At a minimum, the clinician must have competencies in the administration of clinical interviews, semi-structured diagnostic interviews, and self-report rating scales.

The clinical interview (Beutler & Groth-Marnat, 2005) is necessary in order to establish rapport, obtain a broad picture of the adolescent's interests, functioning, and problems, and to gain information about the home and school environments. The clinical interview can lead

directly into a semi-structured diagnostic inquiry, and in fact the latter should not be attempted without at least some less structured interview time.

Determining whether an adolescent manifests a MDD, and ruling out alternative diagnoses and conditions, can be a challenging endeavor. One impetus for the development of criterion-based psychiatric diagnosis was the unreliability of diagnoses based on unstructured clinical interviews. With this in mind, it is important for clinicians to receive training in the administration of semi-structured diagnostic instruments, such as the K-SADS-PL (Schedule for Affective Disorders and Schizophrenia for School-Age Children) (Kaufman et al., 1997), and to use them in a systematic manner. The K-SADS-PL addresses both current and past episodes of each psychiatric disorder. The instrument includes a screening interview incorporating key symptoms from each diagnostic domain to determine if further, more detailed, assessment is necessary. In addition to each of the affective disorders, the K-SADS-PL allows for the assessment of the full range of anxiety, disruptive behavior, and substance use disorders. The clinician interviews the adolescents and their parents separately, insuring that both behavioral observations and the adolescent's subjective emotional state are taken into account. The clinician integrates information from each of the respondents in making the diagnosis. As might be expected, differences between parents and teenagers about the occurrence of specific symptoms, their severity, and their meaning often occur. As a consequence, clinical judgment and sensitivity play an important role in the diagnostic process. It is usually too time-consuming and not necessary to administer an entire semi-structured diagnostic interview in clinical practice. However, practicing clinicians should administer those components of an interview that are indicated by the referral question and/or screening question responses.

When treating depressed youth, it is very helpful to assess the severity and the key concomitants of depression, especially hopelessness and suicidal ideation, and monitor these regularly over the course of the therapy. Objective self-report scales, such as the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996), the Suicide Ideation Questionnaire-Junior High School Version (Reynolds, 1987), and the Beck Hopelessness Scale (BHS; Beck, Weissman, Lester, & Trexler, 1974), can be very helpful in this regard. These scales are quick, efficient, and psychometrically sound. Responses on these measures can be used as a stimulus for discussing the teen's concerns, and complement a clinical discussion of their recent feelings and experiences. Some adolescents are more comfortable acknowledging their feelings on a rating scale, rather than in an interview. With this in mind, the "numbers" of an objective rating scale may or may not mesh with what a teenager (or his or her parent) reports in the session. The art of clinical practice, then, is in integrating information garnered through objective assessment with the subjective reports of the adolescent.

1.6.3 Basic Treatment Competencies

Psychologists who treat depressed adolescents must have the basic competencies required for any psychotherapy, as well as competencies in evidence-based interventions for this particular disorder. We first delineate the basic competencies required for any psychotherapy, relying significantly on the work of the competencies conference (Spruill et al., 2004). Subsequently, we outline basic competencies required to conduct CBT or IPT.

Dovetailing with scientific knowledge competence is the basic treatment competence of knowledge about current evidence-based interventions for the problem of adolescent

depression. This can be expected to constitute a moving target over the course of a psychologist's career, but at present the evidence-based treatments in the psychotherapeutic domain are cognitive behavior therapy and interpersonal psychotherapy. Knowledge of these treatments entails knowledge of the relevant model (theory) of depression and the model of treatment. Such knowledge implies that the psychologist can explain to the adolescent and parents how depression develops or is maintained, and how the treatment at hand proposes to alleviate it. Moreover, the psychologist needs to conduct such psychoeducation in a manner that is accessible to the adolescent and parents, so that the proposed treatment "makes sense" to them and their motivation to engage in psychotherapy is increased.

Basic competence also entails knowledge of the alternative treatments, specifically antidepressant medication. It is beyond basic psychological competence to have detailed knowledge of the pharmacotherapy literature, but at a basic level, the psychologist should be aware of the evidence in support of medication, as this is reflected in review papers and psychiatry practice guidelines (e.g., Hughes et al., 2007). Finally, the psychologist should be aware of the major studies that have compared evidence-based psychotherapy, medication, and their combination, as interventions for adolescent depression (Brent et al., 2008; Goodyer et al., 2007; TADS Team, 2004, 2007). Such knowledge enables the psychologist to have a dialogue with the adolescent and parents in which consideration is given to the selection of an initial single or combined treatment.

Another domain of knowledge required for competent practice is the relevant state laws, and the psychologists' ethical principles and code of conduct. In work related to depressed adolescents, psychologists need to be aware of state laws pertaining to age of legal consent, voluntary and involuntary commitment for inpatient care, confidentiality, and privileged communication. Regarding adolescents of divorced parents, the psychologist must know the custody arrangement, which parent(s) may seek professional care for the adolescent, and what are the rights of the noncustodial parent to be involved in treatment and have access to records. Psychologists who work with adolescents must have the requisite training and supervision for such work and practice within the bounds of their competence. Any professional working with young people must know the requirements for reporting suspected physical or sexual abuse or neglect.

Beyond knowledge, the psychologist needs to demonstrate competence in the establishment of a therapeutic alliance with the adolescent and parents. Spruill et al. (2004) consider here three relevant sets of more specific competencies: relationship skills, communication skills, and sensitivity to individual and cultural differences. Included under relationship skills are the essential components of warmth, genuineness, and empathy (Rogers, 1992). Explanations of evidence-based treatments sometimes tend to omit discussion of these fundamental skills, instead focusing on intervention techniques, but in fact all evidenced-based psychotherapies require fundamental relationship skills. Beginning therapists sometimes err in the direction of emphasizing change techniques too rapidly, such as introducing cognitive restructuring too early in the process of CBT, before allowing the adolescent time to develop trust and feel that her or his concerns have been heard and understood (Wilkes & Rush, 1988). Other beginning therapists rely too rigidly on treatment manuals, almost "reading" the treatment to the adolescent. This is a distortion of evidence-based treatment that actively precludes establishing a therapeutic alliance. Indeed, it is incumbent on therapists who used manual-based interventions to learn how to "breathe life into the manual" (Kendall, Chu, Gifford, Hayes, & Nauta, 1998).

Communication skills are the second elementary competence upon which an alliance depends (Spruill et al., 2004). Verbal communication with adolescents must be honest, open, and clear. The therapist needs to listen to what the adolescent expresses and check to be sure that understanding is accurate. Listening also involves attending to omissions, distortions, repetitions, emphases, and the other markers of the personal salience of interview material that have been identified by Alexander (1990). Nonverbal communication conveys respect for the adolescent and parents, and includes the therapist's dress, posture, eye contact, and time management. Therapists should begin sessions at the scheduled time, alert patients when the end of a session is approaching, and stop the session on time. If urgent matters appear to require additional time, the therapist should renegotiate the end point of the session or schedule an additional meeting within a short period of time.

Sue and Sue (1999) noted relevance of understanding the patient's culture for establishing a therapeutic alliance. If we consider culture to refer primarily to national, ethnic, or racial heritage, it becomes part of a broader context required for understanding the diversity represented by the given patient. Such a context would also include religion, gender, sexual orientation, family composition, geographic location, and socioeconomic status among other possible sources of diversity. Certainly therapists need to understand frequent commonalities in the cultural groups that come to their attention at given clinical sites, always with the caveat that individual differences can override frequent commonalities. This points again to the need to listen attentively to the adolescent's and the parent's narrative at the outset of treatment, so as to avoid erroneous overgeneralizations based on frequent cultural features.

Given requirements for establishing a working therapeutic alliance, the psychologist treating depressed adolescents needs to be able to use information gathered in the assessment to develop a provisional case formulation and treatment plan (Spruill et al., 2004). The case formulation goes beyond diagnosis to include the factors proposed as contributing to the presenting problem (in this case, depression) and the factors representing personal assets upon which treatment can be based. As an example of a case formulation, recent loss of a friend may have precipitated a depression in a young female with a primarily introverted, conscientious personality, and a family history of mood disorders. The impact of loss may be mediated through maladaptive cognitions such as: "I will never again have a good friend like Sarah, who moved away." This depressed young woman may be noted to have supportive parents, good verbal skills, and the capacity for self-reflection, all of which will facilitate psychotherapy. Stemming from the case formulation, the therapist develops a treatment plan. If opting to use IPT, the therapist will help the adolescent to see the link between the loss of her friend and her own depression, and will then focus on moving through the associated grief reaction. If opting to use CBT, the therapist may focus more on the maladaptive thinking that has changed normal sadness into a hopeless kind of depressive reaction. In either case, it is likely that the therapist will want to engage one or both parents in initial psychoeducation about depression and treatment, and perhaps in auxiliary sessions to support the adolescent over the course of treatment.

1.6.4 Basic Competencies in Delivery of IPT or CBT

Evidence-based treatments have by definition been used in clinical trials. As an element of these trials, it is incumbent on investigators to assess and monitor the extent to which therapists

adhere to and competently enact the type of psychotherapy that is being tested in the trial. Thus, a number of scales have been developed for this purpose. In addition, several instruments have been developed to measure psychotherapeutic processes across treatment models. Ablon and Jones (2002) used a rating method to develop prototypes of ideal sessions of IPT and ideal sessions of CBT so that these ideal models could then be applied in a study of actual sessions from the NIMH Treatment of Depression Collaborative Study (Elkin et al., 1989). In Ablon and Jones' study, a panel of ten experts in CBT and a panel of 11 experts in IPT rated each of the 100 items of the psychotherapy process measure on the extent to which the item was characteristic of an ideally conducted session of CBT or IPT, respectively, using a 1–9 rating of each item. Based on their findings about the 20 highest-rated items in each treatment model, we propose that the most basic competencies of the IPT and the CBT therapist, respectively, enact the following characteristics.

In the IPT sessions, the therapist focuses on the patient's interpersonal relationships, puts an emphasis on the patient's emotions, makes interpretations that refer to actual people in the patient's current life, and adopts a supportive stance. Feelings of love, being close to someone, or romantic relationships are a topic of discussion. Attention is drawn to the patient's nonverbal behavior or to the changes in the patient's mood or affect. The therapist facilitates the patient's expression, and clarifies or rephrases the patient's communications. The structure of the session is such that the current or recent life situations, rather than past situations, are the focus of attention, dialogue is focused, and the patient's goals are discussed, as are practical issues such as termination or scheduling.

In the CBT sessions, the discussion centers on cognitive themes, such as ideas or beliefs. There is a focus on activities or tasks for the patient to complete before the next session. The therapist encourages the patient to try out new behaviors, and presents to the patient a different perspective for interpretation of an experience or event. Therapists explain the rationale behind any technique introduced into the session, and tend to be active in structuring the session. CBT therapists may be didactic in manner and give explicit advice or guidance. As in IPT, the patient's goals are discussed, the focus is on the patient's current or recent life situation, and the therapist adopts a supportive stance.

In short, the IPT therapist has the competence to facilitate the patient's emotional expression, to focus on emotions and interpersonal relationships, in the service of resolving one of the four foci of IPT (grief, role transitions, role conflict, interpersonal skill deficits). The CBT therapist has the competence to identify and target relevant cognitions, explain and introduce therapeutic techniques, encourage exploration of new behavior and new perspectives, and assign between-session tasks. Both the IPT and the CBT therapist are competent in providing support, focusing on the present, rather than the past, structuring the session, and structuring the treatment sequence.

1.6.5 Basic Competence with Families

As noted above, basic competence in the treatment of adolescent depression includes formulating a treatment plan that designates how parents will be involved in treatment. Unfortunately, there is very little empirical evidence to guide clinicians in making this decision. As a general rule, the therapist must establish a working treatment alliance with the parents, and must provide parents with at least psychoeducation about depression and about the treatment to be

delivered. Parents should be involved in developing a safety plan in the event that a depressed adolescent experiences worsening suicidal ideation or urges, and most certainly, if there has ever been a suicide attempt. Parents should be kept informed about the progress of the adolescent and about the types of skills that the adolescent is learning in treatment. The therapist must rely on clinical judgment on the question of whether and when to include conjoint parent–adolescent sessions in the course of treatment.

The therapist will, in some cases, note that the parent also has a psychiatric or substance use disorder. In such cases, the related competence is the ability to make a treatment referral at a time and in such a way as to increase likelihood that the referral will be followed.

1.6.6 Advanced Knowledge Competencies

Along with advanced competencies in assessment and intervention considered below, there are advanced competencies in knowledge, case formulation, and case management. We consider these together because they are likely to be relevant to cases marked by greater severity or complexity. Psychologists with advanced competence in the treatment of adolescent depression will be knowledgeable regarding the following aspects of adolescent mood disorders:

1. Psychotic depression: its symptom pattern, and how to differentiate this from schizophrenic disorders, substance-induced psychosis, and bipolar disorder with psychosis
2. Bipolar disorder: prevalence of bipolar outcome in the early-onset mood disorders; its symptoms; and how to differentiate this from nonbipolar depression, schizophrenic disorders, and substance-induced disorders
3. Anxiety disorders: comorbidity of anxiety and depressive disorders; prevalence and patterns of the relative first onset of anxiety and depression in young people; establishing a primary diagnosis for initial treatment
4. Disruptive behavior disorders: comorbidity of disruptive behavior and depressive disorders; prevalence and patterns of the relative first onset of disruptive behavior and depressive disorders in young people; establishing a primary diagnosis for initial treatment
5. Substance use disorders: comorbidity of substance use and depressive disorders; establishing an integrated treatment plan to address both disorders in comorbid cases
6. Medication guidelines: the array of first-line and second-line medications and evidence supporting these; augmenting medications; and principles to follow in the process of medication modification (Hughes et al., 2007)
7. More intensive, lengthy, or invasive treatments for refractory cases: extended IPT or CBT; continuation and maintenance phases of outpatient treatment; hospitalization for suicidal risk; aftercare following inpatient care; evidence pertaining to consideration of electroconvulsive therapy in rare or extremely refractory cases

1.6.7 Advanced Expert Competencies of the Clinician

As noted, adolescent depression is multiply determined. The ways in which biological, social, environmental, and cognitive variables interact in contributing to the development of depression, however, is not well understood. Basic competence requires the ability to construct a case

formulation, but this skill should advance as the clinician's knowledge base advances in concert with scientific advances in the field. By targeting factors implicated in risk for depression, we may be able to offer treatments that yield a positive outcome. This task requires an understanding of research on moderators and predictors of treatment response, and of mediators of depression among youth, as well as competence in their assessment.

Studies indicate that a number of factors predict and moderate response to treatment among depressed adolescents (Brent et al., 1998; Curry et al., 2006). These include: age, family income, verbal IQ, duration and severity of the depressive episode, number of comorbid diagnoses, level of anxiety, hopelessness, parental depression, cognitive distortions, parent–child conflict, and treatment expectancies. Systematically assessing factors that predict outcome can be helpful in selecting the most effective program of treatment, addressing factors that may impede progress, and assisting adolescents and parents to set realistic expectations for rate of progress and likely duration of treatment. Findings from the TADS project indicate, for example, that treatment with a combination of CBT and medication management with fluoxetine may be more helpful for depressed adolescents who manifest high levels of cognitive distortions than treatment with medication alone (Curry et al., 2006). In the same study, adolescents from affluent families (family income over $70,000) were found to respond well to CBT alone. Treatment strategies may be tailored, then, based upon the specific needs and strengths of the patient and an understanding of moderators of outcome. In a similar manner, parental depression, parent–child conflict, and parent and teen expectations about the effectiveness of treatment all have been found to predict treatment response. All can be assessed during an initial diagnostic evaluation and addressed clinically, if appropriate.

Given new developments in research on cognitive factors in depression and the importance of these factors in contemporary cognitive theories of depression (Jacobs, Reinecke, Gollan, & Kane, 2008; Spence & Reinecke, 2003), they can serve as targets of clinical intervention. Assessment that directly addresses a number of recently identified cognitive factors can thus be used to provide a more advanced case assessment.

In addition to the classic cognitive targets of negative automatic thoughts, dysfunctional attitudes and core beliefs, and depressive explanatory style, recent research has identified depressive schemata (including perfectionistic standards), deficient problem-solving motivation, and rumination as potentially relevant cognitive factors maintaining depression. Rating scales have been developed to use in the assessment of each of these variables, and adolescents can be asked to complete them as part of an initial assessment. Both cognitive vulnerabilities and cognitive strengths or abilities can be identified and harnessed. CBT, from this perspective, employs both deficit and competency-based strategies. A teenager may, for example, manifest deficits in problem-solving motivation (they may approach day-to-day problems in an impulsive or careless manner, or attempt to avoid them altogether) and strongly believe that others will reject or abandon him or her, if they get to know him or her. Once identified, these difficulties could be addressed through problem-solving training, social activity scheduling, and schema-focused CBT strategies. Another teenager, in contrast, may demonstrate relatively strong problem-solving skills, yet be troubled by rigid, perfectionistic standards. For her, it would make little sense to introduce problem-solving training. Rather, traditional CBT techniques, such as rational responding and behavioral experiments, might be used to address her perfectionistic beliefs. The use of evidence-based assessment strategies facilitates the development of individually tailored treatment programs, and so can accelerate clinical improvement. These approaches can also be used to identify cognitive factors that are hindering progress.

A promising new area of research with clear treatment implications centers on rumination. Rumination, the tendency to focus repetitively on problems or symptoms of emotional distress, and on their meanings, causes, and consequences, has been found to predict recurrent depression among adults (Papageorgiou & Wells, 2004). Moreover, recent studies suggest that relations also may exist between ruminative style and depression among children and adolescents (e.g., Burwell & Shirk, 2007), and that females tend to ruminate more than males. Interestingly, cognitive behavioral treatments for depression typically begin by teaching patients to monitor and reflect upon their negative moods and their accompanying thoughts. It has long been recognized that the introduction of mood monitoring techniques may be accompanied by an initial increase in depressive symptoms. Cognitive therapists, in essence, may be *encouraging* some patients to ruminate about their concerns. Our clinical impression is that it is not rumination per se that places youth at risk for depression, but "unproductive thought" or "nonsolution-focused thinking." With this in mind, we frequently ask adolescents to reflect briefly (5–10 min) upon their feelings of sadness, the causes and consequences of their distress, and the meanings attached to their experiences. At the end of this period, they are asked to answer a simple question: "And the solution to this is …?" Solution-focused thinking – the ability to identify and evaluate possible solutions – is often accompanied by a rapid decrease in feelings of sadness. This is followed by a discussion of how the teen learned to ruminate (i.e., "Where did you pick this up?"), and the ways in which it is adaptive or maladaptive for him or her.

1.6.8   Advanced Competencies of the Treating Psychologist

We propose that advanced competencies in the conduct of psychotherapy sessions can be observed, rated, and improved through supervision and case consultation. Because both of us practice CBT and have more familiarity with rating levels of competence within that treatment model, we will restrict the focus in this section to advanced competencies in CBT. It seems likely that advanced competencies in IPT would be similar, albeit within a different framework.

When considering advanced competencies in the conduct of CBT sessions, we find it helpful to rely on rating scales used by CBT supervisors in training or research contexts. In particular, we rely on the Cognitive Therapy Rating Scale (CTRS; Young & Beck, 1980) and on the Treatment for Adolescents with Depression CBT Quality Assurance Scale (CBT-QA; Curry, 2000). The former is a frequently used measure that assesses adherence to and competence in cognitive therapy; the latter has been used in only one study, but focuses on CBT treatment of adolescents.

Considering first the 11 items rated on the CTRS and the CTRS manual, advanced competencies in the conduct of treatment sessions include the following dimensions. First, CBT is based on an intervention model of collaboration between therapist and patient. Both work together to experiment with new behaviors and test the accuracy of key cognitions. Beck referred to this fundamental aspect of CBT as "collaborative empiricism" (Beck et al., 1979). At an advanced level, collaboration requires transparency on the part of the therapist as well as therapist skill in facilitating session-related disclosure by the patient. Therapist transparency here refers not to self-disclosure about the therapist's life or subjective experiences, but to the therapist's ability to make clear to the patient the rationale for therapist directions,

guidance or decisions, the rationale for any skill training introduced by the therapist, and the reason for any shifts in session focus that are introduced by the therapist. Simply put, the therapist should never "mystify" or puzzle the patient during sessions. Conversely, the therapist elicits from the patient relevant disclosures about treatment. Thus, the therapist elicits from the patient summaries of main points during and at the end of the sessions, assures that the patient understands how the therapist is formulating the treatment, and encourages the patient to voice any concerns or negative reactions to the therapist or the session. As transparency and disclosure are enhanced, the therapist listens carefully, demonstrates an accurate understanding of the patient's internal experience, and communicates this empathic understanding to the patient.

In addition to transparency and the facilitation of session-related patient disclosure, collaboration requires that the therapist socialize the patient into a progressively more active role over the course of CBT. The therapist makes it clear that therapist and patient constitute a team, encourages the patient to bring into sessions those current concerns and problems that the patient wants to resolve, and works with the patient to formulate "homework" assignments for practice between sessions. With adolescents, this aspect of CBT may be quite puzzling initially. Having been socialized primarily in the role of student, adolescents may enter therapy expecting to be taught in a primarily didactic model. It is helpful for child and adolescent therapists to use the role of "coach" (Kendall, 2006) as an understandable analogy. Like a coach, the CBT therapist will work with the adolescent to develop the adolescent's skills, will engage in dialogue with the adolescent, and will work together to shape "practice" assignments. Collaboration is expected to have a temporal dimension, in that the patient should become progressively more self-directed and active over a typical 8–20-week course of CBT.

A second major advanced competency in the conduct of CBT sessions is the ability to structure sessions so as to provide a reliable yet flexible context in which the patient can compete the necessary work of treatment. In contrast to the specific problem focus or the specific skill training that will change across the course of treatment, session structure should remain relatively consistent throughout treatment. In the TADS CBT-QA procedure, we considered the following elements to be critical to session structure: monitoring the adolescent's mood, setting a session agenda, reviewing any homework from the previous session, introducing or reviewing *and* practicing a particular skill, completing part or all of the agenda, and formulating a new homework. Advanced competence in conducting sessions is reflected in particular qualities associated with each of these elements.

Mood monitoring with adolescents can be completed with a brief questionnaire or in the context of the session. A key feature of mood monitoring with adolescents is to conduct this structural element without demand characteristics, i.e., in a manner that emphasizes openness and honesty and decreases social desirability. A cursory approach diminishes the importance of mood monitoring in the eyes of the adolescent. An approach that directly or indirectly reinforces the reporting of improved or positive mood or discourages the reporting of negative mood increases social desirability demand and precludes useful integration of mood monitoring with understanding and skill training.

Agenda setting is critical to the overall problem-solving model inherent in CBT. Adolescents must often be encouraged to bring in items for the session agenda, since this element of CBT differs rather dramatically from their experience as students in school and also from any experience they may have had with other more nondirective forms of psychotherapy. Advanced competency in agenda setting involves allowing some time for the adolescent to name problems

or concerns that he or she wishes to work on or talk about in the session. It also involves having the therapist designate any item that he or she wants to include in the session, including training in a particular skill. The link from agenda setting to skill training is of particular importance. As the therapist helps the adolescent to learn the skills that are theorized as key to overcoming depression (e.g., behavioral activation, problem-solving, cognitive restructuring), advanced competence is demonstrated by the therapist's ability to link skill training to items on the adolescent's agenda. Finally, advanced competence is demonstrated by good therapeutic judgment: the therapist helps the adolescent to identify the most important agenda items and address these first, with the recognition that not all items may be covered during a particular session. For example, an increase in suicidal ideation represents an urgent problem that must be addressed before any less urgent issues.

Homework review is essential if the therapist is to convey to the adolescent the importance of between-session skill practice. A well-conducted review will allot time to exploration of what the adolescent did or did not complete in the previous assignment, what practical restrictions, negative cognitions, or deficits in prerequisite skills interfered with task completion. Based on such a review, subsequent in-session skill training and between-session homework assignments can be adapted to maximize the likelihood of success for the depressed adolescent. The CBT therapist needs to avoid making the same kind of judgments about incomplete homework that the adolescent has likely experienced as a student. Instead, advanced competence is demonstrated by using whatever has happened with regard to the homework as an opportunity to learn and adjust the treatment plan.

Skill training, which is inherent in the multifactorial model of CBT and perhaps more indirect in cognitive therapy, was used in the TADS CBT. Advanced competence in skill training is reflected first by its integration with the overall treatment plan and with the rest of the current session. Thus, the therapist introduces skill training with a clear rationale that ties it to the therapist's and patient's mutual understanding of the adolescent's depression, explains how the particular skill will be helpful in overcoming depression, and ideally, how it will serve to address one or more items that the adolescent has placed on the session agenda. Second, advanced competence in skill training is reflected in bringing the skill to life. Training should not be passive or overly didactic. The therapist needs to use the full range of CBT's "educational technology" to convey the skill: rationale explanation (why to learn the skill), didactic instruction (how to perform the skill), demonstration (therapist performs or models the skill), and role-playing (adolescent and therapist together practice or enact the skill). If the therapist is using a treatment manual, the therapist must have an understanding of the relevant skill and be able to convey it beyond simply presenting material from the manual. Instead the therapist should be able to modify manual material to fit the developmental level and individual needs of the adolescent, and generate more than one way to "teach" the skill.

Completion of the session agenda and formulation of a new homework should also be integrated with skill training. Advanced competence is demonstrated when the therapist can help the adolescent to see the connections between the new skill and how to solve problems on the agenda. An ideal homework assignment is one that applies the newly learned skill to a manageable, not excessively challenging, problem that the adolescent has identified. The advanced therapist can bring the treatment model to bear on the adolescent's agenda items by showing the adolescent how treatment-based skills can help to resolve problems that are contributing to depression. In this way, the overall advanced in-session competence of the practitioner is what might be termed treatment integration: all elements of a session are interrelated

in a meaningful way that makes sense to the adolescent and that actively and directly addresses the problems she or he has brought into the session.

1.7 Transition from Basic to Expert Competence

We propose that there are a number of pathways from basic to advanced competence in clinical work with depressed adolescents. The key foundation for this process is an attitude of lifelong learning, which is one of the objectives of doctoral training in psychology. First, a clinician should maintain an adequate (but not excessive) caseload of adolescent cases so as to gain exposure to some range of depressed adolescents, their differential diagnosis and common comorbid conditions, and their patterns of response to treatment. Second, clinicians benefit from supervision or case consultation with more advanced colleagues. This can be facilitated in some work settings or projects, such as clinical trials or specialty clinics, but may require active pursuit of supervision opportunities in the local community.

Third, training workshops and continuing education opportunities offered in conjunction with state licensure requirements are of some value in learning evidence-based intervention practices and new assessment methods, but consolidated learning will very likely require follow-up supervision. Fourth, specialty training certification programs, such as that offered by the Beck Institute, involve comprehensive didactic, experiential, and supervised practice components leading to certification. Fifth, involvement in professional or scientific societies often leads to additional training and professional development options. For example, the Association for Behavioral and Cognitive Therapies and the Academy of Cognitive Therapy facilitate continued growth in clinical expertise based on science. In psychology, board certification by the American Board of Professional Psychology (ABPP) requires a process that is intended to lead to improved knowledge of the scientific basis of practice, ethical issues in practice, and evidence-based assessment and intervention practice. In particular, the ABPP Child and Adolescent Psychology Board emphasizes integration of science and practice. Advanced competence can be pursued by following one or several of these paths.

1.8 Summary

MDD was once thought to be restricted to adults, but has been demonstrated to be one of the more frequently occurring diagnoses among adolescents, and also to occur in a substantial number of children. Over the past 30 years, as the diagnostic criteria for MDD have been applied to young people, an expanding body of knowledge has accumulated concerning its prevalence across genders and age groups, its variable course, and its status as a risk factor for subsequent mood disorders in adulthood. The clinical psychologist who works with depressed youth needs to have not only those personal characteristics essential for clinical service delivery, but also those competencies in the areas of knowledge, assessment, and psychotherapy that are associated with addressing this disorder. The clinician's scope of knowledge includes theories of depressive psychopathology, the evidence base associated with these theories, and knowledge of effective treatments. Currently, evidence-based psychological treatments for adolescent MDD include CBT and IPT. In this chapter, we have reviewed supportive evidence for these interventions as well as their proposed targets, the maintaining factors associated

with depression in young people. In general, these can be categorized as cognitive, behavioral, and familial/interpersonal factors.

Basic competencies are those required for entry into practice, whereas advanced competencies imply a highly integrative approach to assessment and intervention based not only on experience but also on supervision, consultation, continuing education, and markers of advancement in the profession, such as board certification. Advanced competency also implies the ability to construct a comprehensive treatment plan and the awareness of how best to involve other professionals in that plan.

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2 Anxiety Disorders

Thomas H. Ollendick · Laura D. Hovey

Abstract: In the first part of this chapter, we describe the anxiety disorders of childhood and the factors that maintain them (e.g., avoidance and safety behaviors, cognitive errors and biases), as well as evidence-based interventions that have been developed for their efficacious treatment. We also speculate on the mechanisms of change that underlie these effective interventions and how these mechanisms address the core psychopathology of these disorders. In the second part of the chapter, we explore issues of competency including both basic and expert competencies. We submit that the competent treatment of the anxiety disorders in childhood requires attention to relational, developmental, and contextual issues as well as the implementation of specific intervention strategies based on specific models of developmental psychopathology. Moreover, we indicate that expert competency is achieved only when one can implement these basic assessment and intervention strategies in a way that addresses such important issues as comorbidity and difficult-to-treat children and their families. We conclude by indicating that attainment of these competencies is a life-long process that is both fluid and dynamic. It is not at all static. We conclude that although much has been learned about the anxiety disorders in childhood and the competencies that underlie their effective treatment, much remains to be accomplished. The journey to understanding, assessing, and developing these competencies is in its own early stage of development.

2.1 Overview

Manifestation of anxiety disorders in youth can range from the relatively circumscribed anxiety of a specific phobia to the more pervasive symptoms of generalized anxiety disorder. According to the *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition* (DSM-IV)-TR (American Psychiatric Association, 2000), children and adolescents can be diagnosed with any of the 13 different anxiety disorders. Like adults, they can be diagnosed with panic disorder with or without agoraphobia (PD), agoraphobia without a history of panic disorder (AG), specific phobias (SP), social phobia (SOP), obsessive-compulsive disorder (OCD), post-traumatic stress disorder (PTSD), acute stress disorder, generalized anxiety disorder (GAD), anxiety disorder due to a medical condition, substance-induced anxiety disorder, and an anxiety disorder not otherwise specified. In addition, children and adolescents may be diagnosed with separation anxiety disorder (SAD), which is specific to childhood, in that onset must be prior to 18 years of age. In previous versions of the DSM (American Psychiatric Association, 1987), two additional anxiety disorders specific to childhood were included, namely avoidant disorder (AD) and overanxious disorder (OAD). However, in the DSM-IV and its revision, AD is subsumed under SOP and OAD is subsumed under GAD; nevertheless, research prior to DSM-IV, including several of the early, large, randomized controled treatment trials typically included youth diagnosed with AD and OAD.

    As with adults, anxiety disorders are the most commonly occurring class of diagnoses in childhood. According to the results from the National Comorbidity Survey Replication,

approximately 30% of the individuals in the USA will manifest an anxiety disorder by the time they reach young adulthood (Kessler, Berglund, Demler, Jin, & Walters, 2005). Moreover, anxiety disorders in youth are commonly seen in clinical practice.

Of note, while certain fears are developmentally appropriate and transient in childhood, anxiety disorders engender significant distress and, if left untreated, would lead to difficulties in social and academic functioning (Ialongo, Edelsohn, Werthamer-Larsson, Crockett, & Kellam, 1994; Strauss, 1988; Strauss, Forehand, Smith, & Frame, 1986; Strauss, Frame, & Forehand, 1987). Moreover, anxiety disorders in youth leave them at risk for development of subsequent internalizing and externalizing disorders, with the former more common for girls and the latter more common for boys (McGee, Feehan, Williams, & Anderson, 1992; Ollendick & King, 1994). In fact, Feehan, McGee, and Williams (1993) found that anxiety comorbid with depression at age 15 was associated with one of the highest rates of the latter disorder (72.7%).

2.2 Recognition of Symptoms and Their Assessment

Recent years have seen much progress in the assessment of anxiety disorders in youth, resulting from both the development of new instruments and more detailed investigations of the older "tried and true" measures. However, the multifaceted nature of the anxiety construct, the number of anxiety disorders, and the high rate of comorbidity can make assessment of anxiety in children and adolescents a complex and time-consuming enterprise. Additionally, self-reports of children presenting for treatment of anxiety disorders may be incomplete due to their hesitancy to admit the socially undesirable symptoms; parent and teacher reports may also be incomplete because many of the symptoms of anxiety disorders may not be directly observable and the degree to which directly observable symptoms are present tends not to be commensurate with physiological or subjective measures of anxiety (Joiner, Schmidt, & Schmidt, 1996; Pina, Silverman, Saavedrea, & Weems, 2001; Silverman & Ollendick, 2005).

As such, the ideal assessment approach utilizes a multimethod, multi-informant approach that can fulfill the goals of (1) discriminating amongst the anxiety disorders, (2) determining if symptoms are clinically significant, (3) differentiating between symptoms of anxiety and overlapping disorders, (4) determining which, if any, comorbid conditions exist, and (5) monitoring treatment progress (Silverman & Ollendick, 2008). Fortunately, a wide array of psychometrically sound instruments, including diagnostic interviews, child reports, parent-and-teacher reports, behavioral observations, and behavioral avoidance tests, has been developed. Although space prohibits a thorough review, we highlight some of the most widely used instruments below.

2.2.1 Diagnostic Interviews

The Anxiety Disorders Interview Schedule for DSM-IV Parent and Child versions (ADIS-IV; Silverman & Albano, 1996) is the most widely used diagnostic interview designed specifically for assessment of youth with suspected anxiety disorders. The ADIS-IV/C + P is a semi-structured interview designed to be administered by trained clinicians. Modules provide for assessment of all the major anxiety disorders as well as other common disorders in youth

(e.g., depression, externalizing disorders). In addition, screening questions for other disorders (e.g., developmental disorders, learning disabilities) are included. The psychometrics of the ADIS-IV/C + P are good (Silverman & Albano, 1996); however, as is the case of diagnostic interviews in this area, parent–child agreement tends to be low (Grills & Ollendick, 2003). Therefore, it is recommended that both the parent and the child interviews be administered, and composite diagnoses, derived from combining both sources of information, be used.

Although, not specifically designed for anxiety disorders, a variety of other diagnostic interviews such as the Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS; Kaufman et al., 1997) and the National Institute of Mental Health Diagnostic Interview Schedule for Children Version IV (NIMH DISC-IV; Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000) provides a thorough assessment of the anxiety disorders and those disorders commonly associated with anxiety. In addition, some of these interviews are highly structured and can be used by interviewers with minimal training.

Although structured and semi-structured interviews are available for use with children and adolescents between the ages of 6 and 18 years and these interviews show good reliability (Silverman & Ollendick, 2005), their use is largely limited to research settings. This seems most likely to be related to the costs associated with using these interviews (i.e., training and purchase of materials) and the amount of time needed to complete them. On this last point, it should be noted that a thorough diagnostic assessment that includes interviews with both the youth and the primary caregiver can take more than 3 h. Despite these real limitations, we suggest that the use of structured and semi-structured diagnostic interviews be routinely integrated into clinical practice for several reasons. First, research shows that clinicians fail to fully evaluate diagnostic criteria when using unstructured interviews (Miller, 2002). This results in unreliable and inaccurate diagnosis, failure to identify comorbid diagnoses, and identification of less-specific diagnoses (i.e., not otherwise specified diagnoses) when compared to structured clinical interviews (Miller, 2001; Miller, Dasher, Collins, Griffiths, & Brown, 2001). Moreover, inaccuracies associated with unstructured interviews have been shown to be related to compromised treatment decisions and greater treatment costs (Miller, 2001, 2002).

2.2.2 Self, Parent, and Teacher Reports of Anxiety in Youth

Numerous psychometrically sound questionnaires exist to assess anxiety in youth. Among the most widely used are the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1985), the Children's State Trait Anxiety Scale (STAIC; Spielberger, 1973), and the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001). Additionally, the Revised Fear Survey Schedule for Children (Ollendick, 1983) can be used to assess for specific fears, including social fears in youth. The RCMAS and STAIC are completed by the child and are intended for children (starting around age 7) and adolescents. The CBCL is completed by parents, and versions are available for youth ranging in age from 1 year and 6 months to 18 years; a parallel teacher version and self-report, the Teacher Report Form (TRF; Achenbach & Rescorla), and the Youth Self Report (YSR; Achenbach & Rescorla), are also available. The RCMAS, STAIC, and the CBCL have been shown to discriminate between youth with anxiety disorders and healthy children as well as between youth with an anxiety disorder and an externalizing disorder; these measures are less useful however in discriminating between anxiety and depression in youth (Seligman, Ollendick, Langley, & Bechtoldt Baldacci, 2004).

Several more recent self-report instruments, such as the Spence Child Anxiety Scale (SCAS; Spence, 1998), the Multidimensional Anxiety Scale (MASC; March, Parker, Sullivan, Stallings, & Conners, 1997), and the Screen for Child Anxiety-Related Emotional Disorders (SCARED; Birmaher et al., 1997), have been developed to assess anxiety in youth. These questionnaires have the advantage of items that map directly onto the symptoms of the DSM-IV anxiety disorders; therefore, although they cannot substitute for a formal diagnostic interview, they can aid in the diagnostic process and monitoring of treatment progress.

2.3   Maintenance Factors of the Disorder or Problem

There are two broad factors that appear to relate to maintenance of anxiety symptoms in youth once they have developed. The first is avoidance and safety behaviors. The second broad category is cognitive errors and biases.

2.3.1   Avoidance and Safety Behaviors

Research suggests that children and adolescents with clinically significant anxiety tend to choose avoidant coping strategies when dealing with anxiety-provoking situations (e.g., Chorpita, Albano, & Barlow, 1996). For example, youth with SAD may refuse invitations from friends for sleepover parties or even after-school playdates. Similarly, youth with SOP may avoid asking questions in class or participating in extracurricular activities, such as joining a sports team or trying out for a school play, which give rise to fears of negative evaluation. Children and adolescents with PD often engage in two types of avoidance – avoidance of interoceptive cues of panic symptoms and exteroceptive cues that might trigger panic symptoms (i.e., agoraphobic avoidance). Examples of the former include avoiding exercise or any strenuous activity that might cause tachycardia, while examples of the latter might include avoidance of shopping malls, riding/driving in a car, or any situation that has become associated with a panic attack (Ollendick, 1998). In some especially difficult cases, children with various types of anxiety disorders (e.g., SAD, SOP, PD, SPs) will refuse to attend school and avoid all that school attendance entails.

Alternatively, children and adolescents with anxiety disorders may choose to approach an anxiety-provoking situation by using or enlisting a variety of safety behaviors. This may be especially true in situations that are difficult for a child to avoid. For example, a child with SOP may not be able to avoid being called upon by the teacher in class but could instead engage in a safety behavior by speaking too softly for anyone to hear. Similarly, a child with SAD may not be able to attend school unless the parents and school have arranged for a favored peer or a "safe person" to be in the child's class. Likewise, a child with SP of dogs might report liking to play indoor games rather than to play outdoors where dogs might be present. Other safety behaviors may include keeping a good luck charm or a favorite toy within reach or making sure to have access to anxiolytic medication when approaching an anxiety-provoking situation.

The problem with avoidant and safety behaviors is that although they provide temporary relief, they preclude opportunities for habituation and more adaptive learning in the long term. The socially anxious child who refuses to go to school or responds to questions in an inaudible voice because she or he does not want to have to speak in front of peers never has the

opportunity to learn that this situation is not in fact as dangerous as she or he assumes and that his or her anxiety would dissipate with prolonged exposure. As such, avoidance and safety behaviors beget continued anxiety and avoidance.

Interestingly some studies suggest that parents of children with anxiety disorders, unaware of the undesirable consequences, encourage such behavior. For example, some studies show that children choose increasingly avoidant strategies for dealing with anxiety-provoking situations after being given the opportunity to discuss the situations with their parents (Chorpita et al., 1996). It may be that in an effort to help their child avoid painful situations the parent becomes overprotective and directly instructs the child in avoidant coping strategies. This may in part be because parents of anxious children are more likely to have problems with anxiety themselves (e.g., Beidel & Turner, 1997).

2.3.2 Cognitive Errors and Biases

It has been demonstrated that children with anxiety disorders, than the children with healthy controls, are more likely to interpret ambiguous situations as threatening (Chorpita et al., 1996; Gifford, Reynolds, Bell, & Wilson, 2008); they also demonstrate an attentional bias for threatening information (Roy et al., 2008), and are more likely to remember threatening information (Watts & Weems, 2006). In addition, children with anxiety disorders are likely to overestimate the probability of undesirable outcomes. For example, a boy with SOP giving a speech may see two audience members whispering among themselves and believe that they must be making fun of him. Similarly, a child with a specific phobia of dogs may be more likely to both notice and remember instances of dogs behaving aggressively. A child with GAD may hear that her father had a fight with a co-worker and she might come to believe that the father will soon lose his job and that this means that the family will become homeless.

Such errors and biases help to perpetuate the child's view of the world as threatening and inhospitable and in this way help to maintain the symptoms of anxiety. Interestingly, as with avoidance behaviors, there seems to be emerging evidence that children can learn these cognitive errors and biases, at least in part, from their parents. For example, Perez-Olivas, Stevenson, and Hadwin (2008) found that high maternal overinvolvement, often linked to anxiety symptoms in youth, was related an attentional bias toward threatening stimuli in children evidencing symptoms of separation anxiety. Further, the relationship between maternal overinvolvement and separation anxiety symptoms was partially mediated by the children's attentional bias, suggesting that parental characteristics often linked with anxiety (e.g., overinvolvement and control) may exert their influence through the pathways implicated in a cognitive model of anxiety.

2.4 Evidence-Based Treatment Approaches

Although there are some notable exceptions (Muratori, Picchi, Bruni, Patarnello, & Romagnoli, 2003), the majority of the treatment outcome research for anxiety disorders in childhood has employed cognitive-behavioral treatment (CBT) strategies and, to date, only CBT interventions have received the degree of support necessary for identification as evidence-based treatments (EBTs) (Ollendick & King, 1998; Ollendick, King, & Chorpita, 2006).

In the first randomized controlled trial of a psychological intervention for childhood anxiety disorders, Kendall (1994) compared a CBT intervention for 9–13-year-old children with a wait-list control condition. Treatment consisted of teaching the children to (1) recognize the physiological, emotional, and cognitive symptoms that accompanied their anxiety, (2) develop coping strategies including replacing anxiety-provoking cognitions with coping cognitions, and (3) use self-reinforcement, relaxation training, and both imaginal and in vivo exposure. Treatment was delivered individually in an average of 17 sessions over 16 weeks. Both parents and children reported significant improvement in the children's symptomatology. Moreover, changes were both statistically and clinically significant. For example, while 64% of youth in the CBT condition no longer evidenced an anxiety disorder diagnosis at posttreatment, only 5% of the children in the wait-list condition were diagnosis-free at the end of the wait-list period. Moreover, in a larger trial of the same treatment with similar-aged children, Kendall et al. again demonstrated the efficacy of their treatment (Kendall et al., 1997), with approximately 53% of the treated participants no longer meeting criteria for their primary anxiety disorder at posttreatment as compared to 6% of the participants in the wait-list condition. Further, Dadds, Heard, and Rapee (1992) and Barrett, Dadds, and Rapee (1996) have shown that a similar but somewhat shorter (i.e., 12 session) CBT program could be delivered with comparable outcomes.

All told, over 51 randomized controlled trials and small *n* designs have supported the effectiveness of CBT for the treatment of anxiety disorders in youth (Ollendick, Jarrett, Grills-Taquechel, Seligman, & Wolff, 2008). In general, these studies suggest that approximately two thirds of the youth recover (i.e., no longer meet criteria for the anxiety disorder that was the focus of treatment) at the end of treatment. Moreover, long-term outcome studies suggest that these gains are maintained over time and, in at least some instances, continued improvement is seen (Barrett, Duffy, Dadds, & Rapee, 2001; Kendall & Southam-Gerow, 1996).

Importantly, these and other studies suggest that CBT may be efficacious for a wide variety of youth. Studies have included youth with a variety of anxiety disorder diagnoses and comorbid conditions, and results suggest that children with comorbid conditions, the rule rather than the exception in the anxiety disorders, achieve results similar to those of youth not evidencing comorbidity (Kendall & Southam-Gerow, 1996; Ollendick et al., 2008; Rapee, 2003). Furthermore, evidence across studies suggests that CBT treatment can be successful for primarily Caucasian youth from the USA (Kendall, 1994; Kendall et al., 1997), African-American youth in the USA (Ginsburg & Drake, 2002), Australian children (Barrett et al., 1996, 2001; Shortt, Barrett, & Fox, 2001), Canadian and French Canadian children (Léger, Ladouceur, Dugas, & Freeston, 2003; Manassis et al., 2002; Mendlowitz et al., 1999), and Israeli children (Toren et al., 2000).

While both randomized controlled trials and single-case design studies have demonstrated efficacy of CBT treatments, treatment as usual (i.e., treatment as it is commonly practiced in clinical, rather than research, settings) has been shown to have virtually no positive effects for childhood problems, including the anxiety disorders (Weiss, Catron, Harris, & Phung, 1999; Weisz & Weiss, 1989; Weisz, Weiss, & Donenberg, 1992). There is some evidence that these conclusions apply to children seen for treatment in both clinical as well as research settings. In fact, direct comparisons of EBTs and usual care support the superiority of EBTs in clinical practice (Weisz, Jensen-Doss, & Hawley, 2006). Additionally, benchmarking studies with adults diagnosed SOP suggest that outcomes for CBT in research and private practice are comparable (Gaston, Abbott, Rapee, & Neary, 2006). However, although these findings suggest that CBT

may be an effective as well as an efficacious treatment for youth with anxiety disorders, additional research is needed to bolster these conclusions.

2.4.1   Parent Treatment

Given findings relating parental anxiety (Beidel & Turner, 1997) and parenting behaviors, such as parental overinvolvement and control (Hudson & Rapee, 2001, 2005) to anxiety in youth, it is not surprising that several trials have investigated the effects of adding parent treatment to conventional CBT packages. What is surprising is the varied results. For example, Dadds et al. (1992) and Barrett et al. (1996) investigated the effects of parent treatment plus CBT treatment for children with anxiety disorders. Treatment for parents consisted primarily of education on reinforcement and communication and problem-solving techniques aimed at increasing parents' ability to work together and decreasing parental conflict concerning child-rearing. While a preliminary investigation involving 14 children with diagnoses of SAD OAD found that CBT + parent treatment was superior to a wait-list control (Dadds et al.), a more extensive investigation that allowed for the comparison of CBT + parent treatment to CBT for the child alone (Barrett et al.) resulted in mixed findings. In terms of diagnosis at posttreatment, significantly more children in the CBT + parent treatment group than the CBT alone treatment showed improvement. However, child self-reports did not support the superiority of one method of treatment over the other, while conclusions based on parent reports were mixed. Further, when the superiority of CBT + parent treatment was supported, it was moderated by child sex and age. Girls and younger children had better outcomes with the CBT plus parent treatment as compared to the CBT treatment for the child alone. However, for boys and the older children the treatments seemed to be comparable.

Similarly, another study by Barrett (1998) found modest benefit when a family management treatment was added to group CBT for children between the ages of 7 and 14 years diagnosed with SAD, OAD, or SOP. However, the superiority of parent treatment over CBT for the child alone was not supported in a trial for children and adolescents with posttraumatic stress symptoms resulting from sexual abuse (King et al., 2000) nor for youth with SOP (Spence, Donovan, & Brechman-Toussaint, 2000).

Of note, however, is a study which matched treatment to parental psychopathology. In a trial of 67 youth between the ages of 7 and 14 with diagnoses of SAD, SOP, OAD, SPs, or GAD (Cobham, Dadds, & Spence, 1998), parental anxiety was assessed and some families were given CBT for the child alone, while others received CBT for the child plus parent treatment. While the addition of parent treatment was not significantly better in the absence of parental anxiety, it did significantly improve outcomes for the group with parental anxiety.

Taken together, these studies suggest that in some cases addition of parent treatment may improve outcomes for youth with anxiety disorders but that more research is needed to determine when this is true. To date it appears that parent treatment may be significantly better only for younger girls and in families where one or both parents also experience significant anxiety. However, these results await replication. In addition, research is emerging on the mechanisms that result in parental transmission of anxiety to children (see section on maintenance factors for some examples) which may help clinicians to more specifically tailor the types of treatment that parents of anxious children receive.

2.5 Mechanisms of Change Underlying the Intervention

Several mechanisms of change underlying the efficacy of both cognitive and behavioral therapies of the anxiety disorders have been put forth. Early theories suggested that habituation or counterconditioning accounted for the effects associated with exposure in the behavior therapies (Wilson & Davison, 1971), while corrections in cognitive distortions and maladaptive beliefs were thought to account for the changes associated with cognitive interventions (e.g., Ellis, 1962). However, newer theories have either altered or expanded upon these basic explanations.

For example, Foa and McNally (1996) hypothesized that exposure therapies work because they create new adaptive fear networks that compete with existing maladaptive fear networks which underlie pathological anxiety. Essentially, Foa and McNally suggested that maladaptive fear networks consist of erroneous stimulus–stimulus and stimulus–response associations as well as exaggerated estimations of negative consequences associated with the fear. For example, a child with SOP might associate talking with peers with negative stimuli such as critical comments and rejection from classmates. The child might also associate talking with peers with increased physiological arousal and behavioral avoidance. Moreover, the child might also believe that saying something inappropriate during a conversation with a peer would result in lifelong ostracism from all peers. According to Foa and McNally's theory, exposure therapy creates a competing fear network that does not contain these maladaptive connections but instead includes more adaptive associations such as conversation with peer – pleasure. Although the pathological network would continue to exist, the more adaptive network would also be available and would be activated in most situations. On the other hand, other theories suggest a more cognitive explanation for the efficacy of exposure and the behavior therapies. These theories suggest that exposure without the typically ensuring response of avoidance increases self-efficacy for coping with the feared situation and that increased self-efficacy in turn results in decreased anxiety (Williams, 1996).

Current explanations for cognitive therapies still include changes in maladaptive cognitions (e.g., negative self-talk, overgeneralization, overestimation), but given the current state of research in cognitive processes in anxiety (see previous section on maintenance factors), newer theories also focus on changes to attentional, memory, and interpretive biases as well.

Unfortunately, while theory development has progressed as effective treatments have been established, adequate tests of these theories are notably lacking, particularly in child and adolescent samples. For example, in a relatively recent review of the youth psychotherapy literature, Weersing and Weisz (2002) found that while 22% of the trials examined learning-based therapies and 60% of the cognitive-behavioral trials assessed possible mediators of treatment outcome, few studies formally tested for mediation. Furthermore, when mediation was assessed, interpretation of findings was complicated by methodological problems including the fact that changes in symptoms and candidate mediators were assessed at the same point in time (i.e., posttreatment) and that self-report methods were used to assess both treatment outcome and potential mediators, introducing the confound of monomethod variance (Prins & Ollendick, 2003). With these caveats in mind, two studies have found that changes in anxiety in CBT treatment for anxious youth are related to changes in negative self-talk (Kendall & Treadwell, 2007; Treadwell & Kendall, 1996). In addition, decreases in physiological arousal (i.e., habituation) have been found to change after successful learning-based treatment of anxiety in youth (Weersing & Weisz, 2002). Other possible mediators have not been assessed; thus, this remains an important area for future investigations.

2.6   Basic Competencies of the Clinician

As is evident, CBT interventions have been found to be effective in the treatment of children and adolescents with diverse anxiety disorders. Overall, significant reductions in symptoms or diagnoses have been observed in about 60–70% of the treated youth, compared with about 5–20% of the youth in wait-list comparison groups and 15–30% of the youth in placebo and alternate treatment conditions (Ollendick & King, 2004; Silverman, Pina, & Viswesvaran, 2008). However, given the variety of anxiety disorders that have been treated in these studies (e.g., GAD, SAD, SOP, SP, OCD, PTSD) as well as the format in which the treatments have been delivered (e.g., individual/group, child/family), it is somewhat difficult to specify the exact competencies involved in successful treatment. Still, most of the studies have shown similarly good outcomes regardless of the format of treatment or the specific anxiety disorders treated, and, in as much as the mechanisms of change underlying the interventions are similar, some basic and expert competencies can be identified.

We begin our treatment of competencies by indicating that basic competencies for the treatment of any set of childhood disorders, including the anxiety disorders, are embedded in the core competencies that all professional psychologists share and are expected to evidence: (1) application of scientific knowledge to clinical practice, (2) use of psychometrically sound, evidence-based assessment instruments, (3) implementation of theory-driven, evidence-based interventions, (4) competence in consultation and interprofessional collaboration, (5) development of supervisory skills, (6) attention to professional development and ongoing continuing education, (7) competencies in ethical and legal issues, and (8) awareness of individual and cultural diversity (see Kaslow, 2004; Kaslow et al., 2004; Roth & Pilling, 2008; Sharpless & Barber, 2008). Hupp, Jewell, and Reitman described these basic competencies and others in more detail in ▸ Chapter 1, Volume 1 of this Handbook and they will not be elaborated upon here. Of course, each of these competencies needs to be brought to life in the treatment of any one set of disorders. For example, use of evidence-based assessment instruments requires the clinician to be aware of, master, and use assessment instruments that possess a strong evidence base for a given set of disorders. As noted, such tools include diagnostic interviews, rating instruments, and behavioral observation procedures. Recently, in describing evidence-based assessment tools for the child anxiety disorders, Silverman and Ollendick (2005, 2008) presented the evidence base for different instruments in reference to three distinct assessment purposes: diagnosis, case conceptualization and treatment planning, and treatment monitoring and treatment outcome evaluations. Suffice it to indicate here that many frequently used assessment tools did *not* possess sufficient evidentiary support and were not recommended for ongoing clinical or research use. Still, several evidence-based instruments were identified and recommended for use in best clinical practices. Tools such as the Anxiety Disorders Interview Schedule for Children and Parents (Silverman & Albano, 1996), the MASC (March et al., 1997), the FSSC-R (Ollendick, 1983), and the behavioral approach tasks (BATs) met exacting criteria and were recommended for ongoing use. Basic competencies to administer, interpret, and score these instruments are required (see earlier chapters in this volume). Thus, the use of these evidence-based instruments requires the clinician to apply basic or core competencies (e.g., evidence-based assessment tools) to specific problems and disorders (e.g., anxiety disorders in children).

Similarly, the use of evidence-based interventions requires the clinician to be aware of, master, and use interventions that possess strong empirical support for their use *with specific*

disorders. Ollendick and King (2004) and Silverman et al. (2008) reviewed such interventions for children with phobic and anxiety disorders and provided critical commentary on them. A reasonable inference from these reviews is that clinical outcomes will be improved when clinicians abandon "unproven" or "untested" therapies and adopt evidence-based therapies that have been shown to be effective. Of course, this conclusion also implies that clinicians need to master a reasonably large number of treatment protocols or manuals, or need to specialize in the treatment of a limited set of disorders in order to manage information and skill overload. Thus, while the emergence of evidence-based treatments represents a major advance in the field, the sheer number of effective interventions presents a significant challenge for both therapists-in-training as well as seasoned practitioners. Given the information and skill acquisition demands inherent in mastering different treatments, we propose that what is critical for improvement of child and adolescent therapy in general and with the anxiety disorders in particular may be less about mastery and use of specific treatment manuals and more about understanding and applying core change principles and procedures that are inherent in manuals with known efficacy for any set of disorders. To this end, our attention might be redirected to core principles and procedures that are captured in empirically supported protocols (Ollendick & Shirk, in press). Recently, Woody and Ollendick (2006) summarized the core principles of effective treatments for the anxiety disorders and recommended a common set of procedures in their treatment. In conducting evidence-based treatment for the anxiety disorders, they recommended that clinicians should do the following:

- Challenge misconceptions through discussion and explicitly question the evidence.
- Actively test the validity of erroneous and maladaptive beliefs through behavioral experiments.
- Use repeated exposure to the feared situation to reduce the intensity of the fear response.
- Eliminate avoidance of feared situations.
- Improve skills for handling feared situations.

Of importance, these five procedures are based on scientific knowledge about the anxiety disorders. The first two procedures address cognition and represent methods that describe what is commonly referred to as cognitive restructuring. The third procedure, fear reduction, relates to the affect and the physiological arousal that so frequently accompanies anxiety. The last two procedures explicitly involve behavior, addressing avoidance, and a variety of personal interactive skills. These five procedures do not stand in isolation, however. They each serve to promote the goals of the others, which is one likely reason why evidence-based treatments seldom use strategies based on just one of the procedures and the principles that underlie it. For example, eliminating avoidance of feared situations (behavior domain) not only promotes a return to normal and adaptive functioning, but also promotes exposure to feared situations (affective domain) and serves to challenge and alter maladaptive ideas about bad things that might happen in those situations (cognitive domain). As can be seen, treatment of childhood anxiety disorders requires considerable scientific knowledge about specific disorders and the development of skill levels to implement treatments based on that knowledge.

Of course, these five core procedures for the treatment of the anxiety disorders and the competencies associated with them do not operate or exist in a vacuum; for their effective use, they in turn are likely related to core developmental and contextual issues that require additional basic competencies. Clinicians working with children and adolescents are faced with a challenge rarely shared by their adult therapist counterparts. Between preschool and late

adolescence, children undergo enormous developmental changes in their cognitive, linguistic, emotional, interpersonal, and biological systems. Child clinicians are faced, not only with individual differences, but with developmental differences as well. About 25 years ago, Ollendick and Hersen (1984) suggested that the "same" interventions delivered to children at different ages could produce dramatically different results due to the developmental differences in child capacities. In this respect, our interventions are constrained or facilitated by the developmental processes (Ollendick & Shirk, in press; Shirk, 1988; Silverman & Ollendick, 1999).

For the most part, the search for potential developmental predictors of treatment outcome has focused on child age. Age, of course, represents a proxy for developmental processes, a stand-in for adaptive or maladaptive processes that develop over time and unfold with increasing maturation and experience. Age could be a proxy for processes that either *facilitate* or *impede* treatment efficacy. Most CBT interventions have concentrated on children between the ages of 7 and 14 years, with fewer interventions for younger children or adolescents. Despite this restricted age range, some studies suggest age-related trends in response to CBT treatments for anxiety. For example, Southam-Gerow, Kendall, and Weersing (2001) examined predictors, including child age, of treatment response among children aged 7–14 who received CBT for anxiety disorders. Poor treatment response was defined as the presence of any anxiety disorder diagnosis following a full course of CBT. Analyses revealed a number of predictors of poor response including higher levels of internalizing symptoms at pretreatment, higher maternal depression, and *older* child age. Child age continued to predict poor response even when analyses controlled for the other predictors.

Unlike an early meta-analysis of self-instructional CBT interventions by Durlak, Wells, Cotton, and Johnson (1995), increasing age was not associated with greater treatment benefit among these youth. As such, these results are inconsistent with a developmental facilitation perspective (e.g., increasing age is associated with greater capacity to utilize and benefit from interventions). However, because CBT approaches to anxiety reduction involve both cognitive and behavioral components, it is possible that children at different ages respond to different facets of the intervention (e.g., cognitive restructuring or modifying self-talk, exposure to anxiety-producing situations). Further, as Southam-Gerow et al. (2001) point out, it is not clear if the poorer response of older children is a function of a poor developmental fit between the activities that comprise CBT in these interventions (the activities may be too "childish") or because the anxiety problems were simply present for a longer duration of time (i.e., more entrenched and refractory to change).

In another illustrative study, Barrett et al. (1996) examined age as a potential moderator of treatment outcome in CBT for child anxiety (see above). As will be recalled, findings indicated that younger children responded more favorably (more were anxiety diagnosis-free) to CBT + FAM than older children. A similar pattern was not obtained with individual CBT. That is, both younger and older children responded similarly to the individual approach. Thus, age moderated the association between treatment and outcome. It effect, inclusion of a family component was more useful for younger children than older ones. From a developmental perspective, these results might be attributed to greater role of parent influence over younger children, or possibly to the greater importance of parent-assisted coping strategies for the younger children. Although this pattern of results clearly needs to be replicated, it raises an important developmental question: might greater treatment benefits be expected from the addition of family or parent components in evidence-based treatments for younger compared to older youth?

As illustrated in these two studies, developmental levels may need to be taken into consideration when selecting and implementing CBT interventions with youth of varying ages. If so, basic competencies related to recognition of development and developmental processes will be important. So too, other competencies related to contextual factors such as therapeutic relationship and alliance factors might need to be taken into consideration, and the appropriate competencies enlisted. The importance of the therapeutic relationship has been recognized by child and adolescent clinicians of different theoretical orientations for a long time (Axline, 1947; Freud, 1946; Kendall, 1991; Ollendick & Cerny, 1981; Patterson & Chamberlain, 1994); however, most research over the last 10–15 years has focused on the identification, manualization, evaluation, and dissemination of specific treatment procedures. The search for evidence-based treatments has been based on the assumption that "specific factors," those procedures that distinguish one form of therapy from another, are likely to be associated with greater improvements in outcomes than variations in "nonspecific factors," those features that are common across therapies. Of all the nonspecific factors, the therapeutic relationship has received the most attention in the child and adolescent research literature (Karver, Handelsman, Fields, & Bickman, 2006; Shirk & Karver, 2003). Moreover, a review of treatment manuals, whether for youth or parent-focused interventions, reveals a common focus upon building a collaborative, working relationship (i.e., alliance) with several studies showing these therapeutic variables associated with differential outcomes in different child and adolescent therapies (Karver et al., 2006; Shirk & Karver). Specifically, Shirk and Karver found modest but comparable associations among measures of therapeutic relationship and alliance and outcomes across behavioral and nonbehavioral, manualized and nonmanualized, and adolescent and child therapies.

Two dimensions of alliance – emotional bond and task collaboration – have emerged as core features in child and adolescent therapies (Estrada & Russell, 1999; Shirk & Saiz, 1992). A third dimension found to characterize adult therapies, agreement of treatment goals, has received less attention, perhaps because of the low rate of goal consensus found in child and adolescent therapy (Hawley & Weisz, 2003). In brief, alliance in youth treatment has been viewed as a *collaborative bond* between the child and the therapist (Kazdin, Marciano, & Whitley, 2005). Of course, because youth rarely refer themselves for treatment and typically reside with adult caregivers, treatment typically involves multiple alliances: between therapist and youth as well as between therapist and parent(s). In fact, for some forms of CBT with younger children, the child's problems may be targeted by working directly and solely with the parent. In such cases, the critical alliance, then, is between the therapist and the parent. In other cases, parents can be involved as consultants or co-therapists. The alliance in child treatment, then, is both multidimensional and multi-relational (Ollendick & Shirk, in press). Typically, therapists are faced with establishing and maintaining a collaborative bond with both youth and adult caregivers.

In sum, a number of basic competencies are evident in the assessment and treatment of children and adolescents with anxiety disorders. These competencies require the clinician to move beyond general competencies of professional psychologists, develop the knowledge and skills necessary to use the principles and procedures underlying effective interventions for select disorders, and implement these interventions in a developmentally sensitive manner within a strong therapeutic relationship. In most CBT trials, efforts have been made to articulate and quantify the basic competencies involved in effective interventions. For example, ◉ Tables 2.1 and ◉ 2.2 specify 13 different competencies required for the effective implementation of an intensive, exposure-based intervention for treatment of specific phobias in youth

(Ollendick et al., 2009). Competencies for working with children (❯ Table 2.1) and parents (❯ Table 2.2) are specified. As can be seen, these competencies consist of items that tap the ability of the clinician to create a good and trusting relationship with the child and the parent; provide basic, accurate information about fears and phobias to both the child and the parent; deal with questions the child or parent might have about phobias in a developmentally sensitive manner; inquire about the child's catastrophic beliefs about the phobias and the response of the parents to these beliefs, as well as the child's own beliefs about the phobic objects; use instruction, modeling, and rewards during the sessions and afterwards to teach and reinforce acquisition of skills for interacting with the phobic object; arrange for intensive exposure activities with the phobic object with such activities arranged in a hierarchical fashion; and, finally, handle difficult situation that arise in the treatment session and use time efficiently during the session so that the session progresses at a maximally therapeutic pace. Quite clearly, a host of competencies is involved in the effective treatment of youth with phobic disorders. A similar set of competencies has been articulated for the treatment of other childhood anxiety disorders (Walkup et al., 2008).

2.7 Expert Competencies of the Clinician

It is difficult to differentiate basic from expert competencies. Indeed, some of the competencies listed in ❯ Tables 2.1 and ❯ 2.2 might be viewed by some as "expert" competencies (e.g., the efficient use of time and pacing during the session, handling of difficulties in arranging for, and conducting, exposure procedures during treatment). However, for us, these abilities and skills are all basic ones – without them, the treatment is likely to be ineffective. For us, the distinction between basic and expert competencies resides in what to do when effective treatments – *competently implemented* – do not work with certain children and families for whom they *should* work. Although many possible scenarios exist, we will illustrate expert competencies by addressing two difficult situations: (1) differential diagnosis and the treatment of children with comorbid disorders and (2) dealing with children and families who are seemingly refractory to treatment.

Differential Diagnosis and Comorbidity. Because of overlap in symptoms and underlying psychopathological processes in the different anxiety disorders, differential diagnosis of the anxiety disorders is not always straightforward even when an evidence-based diagnostic interview such as the ADIS-IV/C + P is used (Silverman & Ollendick, 2005, 2008). It is beyond the scope of this brief chapter to provide a complete analysis of the issues involved in the differential diagnosis of each of the anxiety disorders. Instead, for illustrative purposes, we will focus on critical distinctions that need to be made when working with children and adolescents who present with select anxiety disorders: GAD, PD, and SOP.

In terms of GAD, "worry" is a process in which all youth engage at some point in their lives (e.g., Silverman, La Greca, & Wasserstein, 1995); in addition, worry is a pervasive clinical feature of all anxiety disorders (Weems, Silverman, & La Greca, 2000). As a result, it can be quite difficult to distinguish GAD from the other anxiety disorders. The differential diagnosis of GAD requires that the youth's excessive worrying, which must be endorsed as "uncontrollable" and "hard to stop," *cannot* focus solely on areas of worry that would pertain to other anxiety disorders such as social situations (i.e., SOP), specific objects or events (i.e., SP), or separation from attachment figures (i.e., SAD). Moreover, the worries cannot be related solely to a traumatic

▣ Table 2.1

Therapist competency in one-session treatment of specific phobias: Child form (Ollendick et al., 2008)

General scale:

	0	1	2	3	4	5	6
	Not at all	Yes, but poorly	Yes, but inadequate	Satisfactory	Good	Very good	Excellent
1	Created a good and trustful therapeutic relationship with the child						–
2	Provided general instructions before the start of the exposure						–
3	Provided specific instructions during the exposure session						–
4	Gave factual information about the phobic object/situation						–
5	Dealt with questions as they arose in session						–
6	Continued with exposure exercises during the session						–
7	Guided the child in the exposure procedure						–
8	Used modeling during the session						–
9	Used verbal reinforcement during the session						–
10	Elicited and worked with the child's catastrophic beliefs						–
11	Efficient use of time and pacing during the session						–
12	Described how to continue with self-exposure after the session						–
13	Handled difficulties in the exposure procedure						–

Comments:

■ **Table 2.2**

Therapist competency for one-session treatment of specific phobias: Parent form (Ollendick et al., 2009)

General scale:

	0	1	2	3	4	5	6
	Not at all	Yes, but poorly	Yes, but inadequate	Satisfactory	Good	Very good	Excellent
1	Created a good and trusting therapeutic relationship with parent						–
2	Provided general information about fears and phobias						–
3	Applied this information to the child's specific phobia						–
4	Provided information about the causes of phobias						–
5	Dealt with parents' questions about phobias and their causes						–
6	Asked parents about the child's phobic beliefs						–
7	Inquired about the parents' beliefs regarding their child's phobia						–
8	Provided a description and rationale of the treatment to parents						–
9	Informed parents about the purpose of observing child in treatment						–
10	Described the various components of the treatment protocol						–
11	Described how to continue/monitor exposure after the session						–
12	Described the need to reinforce their child for exposure exercises						–
13	Handled difficulties/questions that arose in the treatment session						–

Comments:

event (i.e., PTSD). GAD also needs to be distinguished from excessive worrying about having a panic attack (i.e., PD) as well as worrying in the form of obsessions (i.e., OCD).

Just as worry is a pervasive clinical feature of the anxiety disorders, so too is panic a common clinical feature that can be present in the different anxiety disorders (Ollendick, Mattis, & Birmaher, 2004). In fact, panic attacks can and do occur with each of the disorders. However, the differential diagnosis of PD requires that the panic attacks are not cued by a specific object (i.e., SP), an evaluative situation (i.e., SOP), separation from attachment figures (i.e., SAD), a traumatic event (i.e., PTSD), excessive worrying (i.e., GAD), and thoughts about exposure to the object or situation related to an obsession (i.e., OCD).

Finally, SOP in children and adolescents is frequently confused diagnostically with GAD. Unlike GAD, however, the youth's worry about social situations or academic performance in SOP stems from a fear of negative evaluation by others. In GAD, the worry about social situations and academic tasks stems from a fear of failing to meet some self-imposed standard. The social avoidance associated with SOP also needs to be distinguished from the social avoidance associated with having an unexpected panic attack and not wanting to have this attack in public places (i.e., PD with agoraphobia). Also it is important to distinguish SOP from pervasive developmental disorder (PDD): Youth with SOP have the capacity for, and interest in, social relationships, while youth with PDD have a general lack of interest in social relationships, although this distinction is being challenged these days.

An examination of comorbidity is just as important as differential diagnosis for treatment planning and evaluation, and requires expert competency skills. Comorbidity, the presence of multiple disorders in an individual at the same point in time, tends to occur at high rates among youth with anxiety disorders. Estimated rates of comorbidity among children and adolescents with clinical disorders run as high as 91% in clinic samples (e.g., Angold, Costello, & Krkani, 1999) and up to 71% in community samples (e.g., Woodward & Fergusson, 2001). Although some of the observed rates of comorbidity reflect assessment artifacts (or other artifacts, such as referral bias), there is considerable "fact" to the observed comorbidity (e.g., Beiderman, Faraone, Mick, & Lelon, 1995; Seligman & Ollendick, 1998). This underscores the need to carefully assess for different disorders during the diagnostic interview process and address them in treatment planning and evaluation.

Emerging evidence suggests that anxious youth who are comorbid with another disorder are more severely impaired than youth with either disorder alone. That is, their problems are more likely to persist over time and are more likely to be refractory to treatment (see Seligman & Ollendick, 1998; Saavedra & Silverman, 2002). For example, in a recent study by Franco, Saavedra, and Silverman (2007), children and adolescents and their parents were administered the ADIS-IV/C + P and four diagnostic groups were formed: "Pure" anxiety (i.e., no comorbidity), anxiety + other anxiety disorders, anxiety + externalizing disorders, and anxiety + depressive disorders. The groups were compared along four sets of variables: sociodemographics, clinical phenomenology, psychosocial, and family factors. Findings revealed that *all* the comorbid groups were more severe than the pure anxiety group on clinical phenomenology and psychosocial factors. In addition, the anxiety + depressive disorders group was found to be the most severe on these variables.

From a best practices standpoint, these findings highlight the need to consider carefully the different types of comorbid patterns that accompany an anxiety disorder in youth and the potential for meaningful distinctions with regard to the specific comorbid pattern that is observed. Such comorbidities might also signal the need for differential treatment strategies

(Ollendick, Jarrett, Grills-Taquechel, Seligman, & Wolff, 2008). Although differential outcomes due to comorbidity have not always been found in the treatment of children with anxiety disorders (Beidel, Turner, & Morris, 2000; Kendall, 1994; Kendall et al., 1997; Manassis, Avery, Butalia, & Mendlowitz, 2004; Ollendick et al., 2009; Ost, Svensson, Hellstrom, & Lindwall, 2001; Silverman et al., 1999a, b), two studies have reported significant differences for participants with anxiety and comorbid diagnoses. First, Berman, Weems, Silverman, and Kurtines (2000) created treatment success and failure groups from two previous RCTs conducted by Silverman et al. (Silverman et al., 1999a, b). No differences were found between the success and failure groups with regard to total number of diagnoses, presence/absence of comorbidity overall, or presence of comorbidity with externalizing disorders specifically. However, differences were found for those who evidenced comorbidity with depression, such that those who had comorbid depression diagnoses were significantly more likely to be in the treatment failure group. In a second study, Rapee (2003) grouped anxious youth by comorbidity type: no comorbid diagnoses, comorbid with other anxiety diagnoses, and comorbid with non-anxiety, externalizing diagnoses. Comparisons were made for pretreatment, posttreatment, and follow-up ratings of internalizing and externalizing symptoms by parents and child self-reported anxiety symptoms. A significant group by time interaction from posttreatment to follow-up on maternal ratings of externalizing symptoms (slight increases for those in the comorbid groups versus continued decrease for the non-comorbid group) and a group with comorbid diagnoses that attended significantly fewer therapy sessions were found.

In brief, then, there is limited information that comorbidity *might* affect treatment outcome for youth with anxiety disorders who are provided evidence-based interventions, although the majority of studies clearly fail to show such effects (Ollendick et al., 2008). Nonetheless, these findings suggest that competencies related to differential diagnosis and developing treatment programs for youth with specific comorbid disorders may be important. As such, expert competencies in these areas are required.

2.7.1 Treatment of Youth Who Are Partial Responders or Refractory to Treatment

As we have noted, the use of behavioral and cognitive-behavioral procedures for treating specific phobias and the other anxiety disorders in children has led to impressive results, with a clear majority of children and adolescents benefiting from these efficacious procedures. Even so, these evidenced-based treatments do not help a significant minority of children with phobic and anxiety disorders (e.g., up to about 30–40%). In these cases, most of the youth are partial responders but a few are truly "refractory" to change. In these clinical trials, only the selection and evaluation of initial treatment attempts have been examined. That is, an initial treatment was implemented and response to treatment was evaluated, and, no attempt was made to address partial responders or individuals who might have been refractory to change. Ollendick and March (2004) suggest that partial responders are those who improve on a number of outcome measures but still retain their pretreatment diagnoses. For example, clinician severity ratings on the ADIS-IV/C + P might be reduced significantly as a result of treatment, but the child still meets criteria for diagnosis and shows avoidance on a behavioral avoidance task and elevated anxiety on self-report measures. In the published clinical trials, most of the poor responders fit into this category; that is, they showed partial response to some outcome

measures but not all. According to Ollendick and March, these individuals might respond to a greater dose of treatment (i.e., more sessions), a modification in the delivery of the intervention (i.e., inclusion of parents), or "fine-tuning" of the intervention itself (i.e., reexamination of the fear hierarchies). In many instances, adjustments in the exposure activities that are thought to be so critical for change might be necessary for the poor responders (see Bouchard, Mendlowitz, Coles, & Franklin, 2004). For example, it might be the case that the purpose of exposure was not sufficiently explained to the child or the child simply did not understand fully the explanation provided by the therapist or the fear hierarchy itself was not sufficiently graded to address the fears expressed by the child. It might also be the case that the therapist did not adequately or fully address the faulty cognitions associated with the fear or anxiety response. For exposure to work effectively corrective information that is incompatible with the dysfunctional associations stored in memory networks needs to be provided and new and more functional associations need to be made (Foa & McNally, 1996). In other cases, a strong therapeutic alliance may not have been developed with the child and his or her family and the family may not have been engaged fully in therapy activities (see Chu & Kendall, 2004; Ollendick & Shirk, in press). In still other situations, it might be the case that comorbidity or some other factor interfered with treatment progress (Ginsburg & Walkup, 2004; Ollendick et al., 2009). In any event, the primary assumption with the partial responders is that the "problem" does not reside solely in the child or his or her family; rather, the problem resides in the selection and implementation of the intervention itself (Ollendick, Davis, & Sirbu, in press). Based on the componential analysis of the anxiety/fear response (Davis & Ollendick, 2005), it is probable that the selected treatment did not address the "complete" anxiety response and hence the dose of treatment was insufficient to produce more complete and lasting change. For example, Öst et al. (2001) failed to show significant change in the disrupted physiology of the children with specific phobias in their study. It is conceivable that the 15% who did not respond in this trial would have done so had this dimension of fear been addressed and more effectively treated. Unfortunately, these studies do not report additional treatment for these partial responders and so we do not know whether they would have responded or not. Indeed, some of them may have been refractory even to additional psychosocial intervention of the same type.

In contrast, for those individuals refractory to treatment, the assumption is that the treatment itself simply does not work with these children and their families, despite its competent implementation (Ollendick & March, 2004; Ollendick et al., 2009). In these instances, the child and his or her family show minimal to no change following what is thought to be a competent implementation of the treatment. Ollendick et al. suggest that a child should not be viewed as refractory to treatment until any one treatment of adequate dose and duration has been attempted for two to three trials. If the child fails to show an adequate response after two to three trials, then alternate treatments including other psychosocial and pharmacological treatments should be tried. ❯ Figure 45.1 describes a flow chart of a treatment algorithm for specific phobia in children with emphasis on the distinction between partial responders and refractory cases (adapted from Ollendick et al.).

Thus, in our experience, most individuals who do not respond fully to treatment are "partial responders" and they do respond more fully when variations in the delivery, dose, or structure of the treatment are considered. In those cases in which the individual is truly refractory to change, the identified treatment might need to be abandoned and alternate treatments considered. In such instances, we would likely consult with a child psychiatric consultant and

■ **Figure 2.1**

Treatment algorithm for difficult-to-treat children
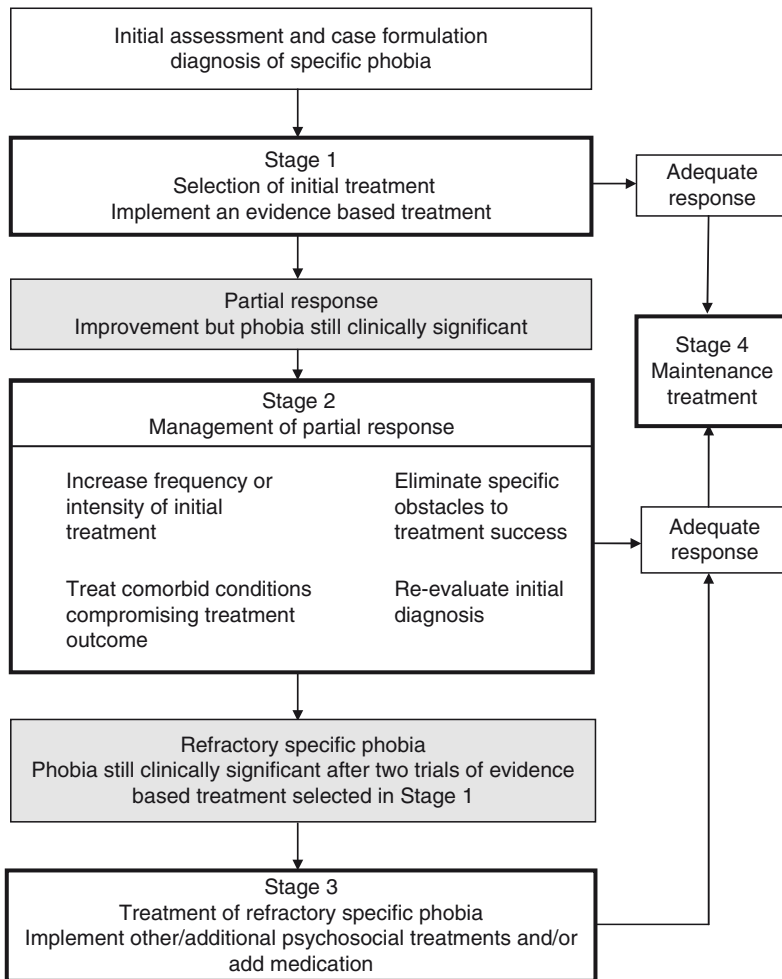
initiate a trial of selective serotonin reuptake inhibitors. However, we would not have likely selected some other psychosocial treatment such as play therapy or family therapy because there is little evidence for the efficacy of such approaches in the treatment of children with specific phobias or anxiety disorders (Ollendick et al., 2009). Importantly, from our standpoint, we would not consider a child and his or her family who fails to respond to treatment as "resistant" to change; rather, we would view their inadequate response to treatment as a "failure" of a treatment that was properly and competently administered. We would also view it as a failure on our part to conduct an adequate cognitive-behavioral assessment and provide the family with an evidence-based treatment based on that assessment and case conceptualization. Quite obviously, considerable expert competency is needed to make these treatment decisions.

2.8   Transition from Basic Competence to Expert Competency

As noted by several authors, the transition from basic competencies to expert competencies constitutes a developmental process. In a recent paper, Sharpless and Barber (2008) described five stages of evolution for intervention competence: novice, advanced beginner, competent, proficient, and expert stages. They linked these stages to rule-learning and rule-governed delivery of therapy for the first three stages and more fluid/flexible and contextual delivery of therapy for the latter two stages. In the first two stages and through the third stage, the therapist might be exhibiting what we have referred to as basic competencies; namely the mastery and delivery of scientific knowledge and therapeutic skills that take into consideration the clinical disorder being treated and the elements of the specific evidence-based treatment used to treat that disorder. However, we would take issue with Sharpless and Barber and argue that considerable flexibility is required even in the basic stages of competency. As a result, we would include the fourth stage, proficiency, as part of a basic competency. To implement an evidence-based treatment *competently*, one must do so flexibly and fluidly and within different contexts (e.g., development, alliance). Contrary to what some have suggested the competent implementation of an evidence-based treatment is not a "paint by numbers" exercise. We would argue further that the expert stage of competency is realized only when therapists are able to adopt and adapt these basic competencies when difficulties are encountered in treatment (i.e., partial responders and those refractory to change). We would also disagree with Sharpless and Barber's depiction that the expert stage is realized when the therapist responds in therapy "not with rules but with what experience has taught them" (p. 51) and that expert therapists should rely on their "intuitions" – the collection of impulses toward actions derived form what previous experiences in similar situations have taught them. In contrast, we would view the expert therapist as someone who is still bound by scientific knowledge and implements that knowledge in a skillful but fluid way depending on a variety of contextual factors.

We appreciate that such definitions of competency are fraught with difficulty; nonetheless, we suggest that expert skills can be acquired in the same fashion as basic skills: instruction, modeling, role-play, feedback, and reinforcement. Of course such skills would need to be obtained overtime and undoubtedly range from initial forays at the novice level to more extended and complex forays at the expert level. We would also agree that the evolution of competencies is a lifelong venture and requires considerable experience with any one therapy. Continuing education would be desired, especially continuing education that includes attendance at seminars, workshops, and master clinician series. Moreover, ongoing supervision of difficult-to-treat cases over time would be desirable.

Finally, we submit that the process of becoming proficient and achieving "expert" status in the treatment of anxiety disorders in children and adolescents is no different than it is for any other psychiatric disorder. Quite obviously, this process entails the accumulation of scientific knowledge about the disorder, its assessment, and its treatment. It also requires ongoing clinical experience, clinical supervision, and continued education so that the evidence-based practices are mastered, used, and evaluated.

2.9   Summary

In the fist part of this chapter, we described anxiety disorders of childhood and the factors that maintain them as well as the evidence-based interventions that have been developed for their

treatment. We have also speculated on the mechanisms of change that underlie these effective interventions and the principles and procedures of change thought to be effective. In the second part of the chapter, we have explored issues of competency including both basic and expert competencies. We argue that the competent treatment of the anxiety disorders in childhood requires attention to developmental and contextual issues as well as the implementation of specific intervention strategies. Moreover, we indicate that expert competency is achieved when one can implement these basic strategies in a way which addresses such important issues as comorbidity and difficult-to-treat children and their families. We conclude by indicating that attainment of these competencies is a lifelong process and one that is fluid and dynamic and not at all static. Although much has been learned about the anxiety disorders in childhood and the competencies that underlie there effective treatment, much remains to be accomplished. The journey to understanding, assessing, and developing these competencies is in its own early stage of development.

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3 Mental Retardation

Jeff Sigafoos · Mark F. O'Reilly · Giulio E. Lancioni

Abstract: Mental retardation is a specialist area of clinical psychology practice that aims to promote improved quality of life for individuals with mental retardation and their families. To promote improved quality of life for children and adolescents with mental retardation and their families, clinical psychologists require a range of basic and expert competencies. This chapter delineates essential areas of basic and expert competencies that will enable psychologists to be more successful in this specialized area of clinical practice. Emphasis is given to the implementation of evidence-based assessments and treatments for children and adolescents with mental retardation. With respect to assessment, the basic competencies include: (a) recognition and assessment of symptoms, (b) familiarity with contemporary definitions and classification systems, (c) intelligence testing, (d) adaptive behavior assessment, and (e) an understanding of how genetic syndromes, learning impairment, operant conditioning, environmental impoverishment, and social barriers influence behavior and development. With respect to treatment, competencies are required with respect to a range of contemporary evidence-based treatment approaches, including: (a) behavioral intervention, (b) cognitive-behavior therapy, (c) family therapy, (d) early intervention, (e) special education, (f) supported employment, and (g) pharmacological treatments. Effective use of these treatment approaches requires skillful implementation and an understanding of the basic mechanisms of change that underlie the approach. Enhancing the quality of life for some children and adolescents with mental retardation and their families will often require additional expert competencies in specialist areas, such as providing culturally-sensitive practices, treating severe problem behavior, and promoting learning in children with profound/multiple impairments. The transition from basic competence to expert clinician requires a planned and systematic approach for gaining relevant new knowledge and clinical skills. By gaining basic and expert competencies, clinicians can greatly enhance the quality of life of children and adolescents with mental retardation and their families.

3.1 Overview

Quality of life is an important outcome measure in clinical psychology (Keith, 2007). Achieving an improved quality of life for clients might thus be seen as one of the clinical psychologist's most important objectives. Progress toward this objective is likely to be particularly important in the field of mental retardation (or intellectual disability), as there is strong evidence that impairments and lifestyle restrictions associated with this condition can negatively influence the overall quality of life (Brown, Parmenter, & Percy, 2007). Clinical psychologists working in the field of mental retardation will need a range of competencies to effectively support children and adolescents with mental retardation in achieving an improved quality of life. To clarify this objective, clinical psychologists would benefit from gaining a general overview of the quality of life concept.

3.1.1 Overview of the Quality of Life Concept

Quality of life includes an objective and subjective component (Cummins, 2005). The objective component covers the number, quality, and nature of one's life circumstances, such as independence and autonomy, academic achievement, community participation, and friendships. The subjective component includes the extent of satisfaction with one's degree of independence, participation, relationships, etc. Both components are important determinants of a person's overall quality of life.

Quality of life for children and adolescents with mental retardation also depends on overall family functioning. Turnbull, Poston, Minnes, and Summers (2007) argued that quality of life should be viewed from the larger perspective of family functioning. In line with this larger family perspective, the emphasis of clinical practice includes provision of support for the child and his/her family. Clinical psychologists working in the field of mental retardation will therefore require skills and competencies related to both individual and family therapy.

In addition to the overall climate of family functioning (Vachha & Adams, 2005), a variety of biological, developmental, psychological, and social variables can influence the functioning and quality of life for individuals with mental retardation (La Malfa, Campigli, Bertelli, Mangiapane, & Cabras, 1997). Along these lines, Dosen (2005) stressed the need for clinicians to consider the extent to which the individual has made "new psychosocial adaptations during each developmental stage" (p. 2). Family values and cultural background should also be acknowledged in clinical practice, as these can exert considerable influence on what is considered successful adaptation and a good quality of life (Xu, Wang, Xiang, & Hu, 2005). Such perceptions are likely to vary from one family and culture to another.

3.1.2 Overview of Clinical Issues in Mental Retardation

Achieving improved quality-of-life outcomes under this multifaceted conceptualization will often require clinicians to simultaneously address several areas of individual and family functioning. Felce (2007) delineated a large number of issues that are likely to be of concern for individuals diagnosed with mental retardation, their families, and the larger community, including "human and legal rights, self-advocacy and empowerment, gender, sexuality, parenting, aging, palliative care, bereavement counseling, health promotion, healthy lifestyles, and quality of life" (p. xix). Many of these issues will become increasingly important during the transition to adulthood. Among children and adolescents, the main clinical issues often center around assessment and intervention to address specific behavioral deficits and excesses.

As should be clear from the above introduction, the decision to work in the field of mental retardation is certainly challenging, but it can also be highly satisfying. A competent clinical psychologist can expect to have a major positive impact on the quality of life of children and adolescents with mental retardation and their families. This chapter aims to delineate the essential areas of knowledge and competences that will enable psychologists to be more successful in this specialized area of clinical practice. In this chapter, we will focus on the clinical competencies related to the assessment and treatment of children and adolescents with mental retardation.

3.1.3 Overview of Chapter Content

In the next section of this chapter, we describe contemporary issues in the recognition and assessment of mental retardation. Thereafter, we identify factors that can maintain behavioral deficits and excesses commonly associated with mental retardation. Our subsequent discussion of evidence-based treatment approaches reveals the need for clinicians to gain a thorough understanding of the change mechanisms that underlie effective intervention. Developing a more evidence-based practice will require a range of competencies. In the final sections of this chapter, we describe those competencies that are most relevant to achieving improved quality of life outcomes for children and adolescents with mental retardation and suggest strategies to facilitate the transition from basic competence to expert clinician.

3.2 Recognition of Symptoms and Their Assessment

Quality of life for children and adolescents with mental retardation and their families can be greatly improved by ensuring timely recognition and assessment of symptoms. Competence in symptom recognition and assessment is required for making accurate diagnoses, counseling parents, consulting with other professionals, and planning intervention. Gaining competence in the recognition and assessment of the symptoms of mental retardation requires familiarity with contemporary definitions and classification systems.

3.2.1 Definitions of Mental Retardation

Definitions of mental retardation have undergone considerable change over the last several decades (Harris, 2006; Scheerenberger, 1983). Contemporary definitions of mental retardation are found in the DSM-IV-TR (American Psychiatric Association, 2000), ICD-10 (World Health Organization, 2001), and Luckasson et al. (2002). Carr and O'Reilly (2007) have provided a thorough comparison of these three systems for defining and classifying mental retardation.

All three of the above referenced systems define mental retardation in terms of two main factors: (a) significantly sub-average intellectual functioning and (b) concurrent deficits in adaptive behavior functioning. These deficits are present, and are usually first identified in the developmental period prior to adulthood (i.e., prior to the age of 18 years).

3.2.1.1 Intellectual Functioning

Significantly sub-average intellectual functioning is typically defined as an IQ score that falls two standard deviations or more below the mean on a standardized and individually administered intelligence test. Because most IQ tests have a mean of 100 and a standard deviation of 15 or 16, the cut-off score for mental retardation is generally considered to be an IQ of 70–75. This 5-point range allows for measurement error and acknowledges that the diagnosis of mental retardation is not based on IQ scores alone, but includes the requirement for concurrent deficits in adaptive behavior functioning.

3.2.1.2 Adaptive Behavior Functioning

The second major symptom of mental retardation is the presence of substantial deficits in adaptive behavior functioning. Adaptive behavior functioning is defined in the DSM-IV-TR as the extent to which the individual copes with the demands of everyday living. According to DSM-IV-TR criteria, a diagnosis of mental retardation requires deficits in adaptive behavior functioning "in at least two of the following skill areas: Communication, self-care, home living, social/interpersonal skills, use of community resources, self-direction, functional academic skills, work, leisure, health and safety" (American Psychiatric Association, 2000, p. 41). Clinical assessment of adaptive behavior functioning must take into account the person's age, sociocultural background, and the environments (e.g., home, school, and community) in which the person is expected to function.

3.2.2 Classification of Mental Retardation

Mental retardation is classified in terms of etiology, severity, and required levels of support (Luckasson et al., 2002). With respect to etiology, mental retardation has a range of causes including environmental toxins, infections, injury, and genetic syndromes (MacLean, Miller, & Bartsch, 2001). Classification in terms of etiology is useful, as many syndromes are associated with unique behavioral phenotypes and specific intervention needs. Classification based on etiology is, however, somewhat limited because the cause of mental retardation often remains unknown. Thus, while an etiology can usually be identified in approximately 75% of cases of moderate to profound mental retardation, only up to 40% of cases of mild mental retardation have a known cause (Harris, 2006). These percentages are likely to improve with advances in genetic and biomedical research.

3.2.2.1 Severity

Clinical psychologists have found it useful to classify mental retardation in terms of severity. Severity in this context generally refers to the degree of general intellectual impairment. Four levels of severity are listed in the DSM-IV-TR: Mild, Moderate, Severe, and Profound. Classification in terms of severity is useful because the presenting profile and needs of individuals with mild mental retardation, for example, are likely to be very different from the needs of individuals with severe and profound mental retardation. However, it must be recognized that there is considerable variability in cognitive and adaptive behavior functioning and learning potential within each of these four categories.

Mild Mental Retardation
Mild mental retardation is associated with IQ scores of 50–55 to approximately 70. Mild mental retardation is often attributed to cultural–familial factors, but etiology may include the full range of known causes (i.e., injury, infection, genetic syndrome, etc.). Cases of mild mental retardation are often not identified until the child enters school and begins to fail academically. However, clinicians should be alert to delays in early developmental milestones (see Carr & O'Reilly, 2007, pp. 4–6), as these may indicate the presence of mild mental retardation that might not be otherwise noticed until the school years.

Moderate Mental Retardation

Moderate mental retardation is associated with IQ scores that range from 34–40 to 50–55. Thus, an individual with an IQ score of 50 or 55 could be classified as having mild or moderate mental retardation depending on the extent of adaptive behavior deficits. Generally, individuals with moderate mental retardation are more likely to have a known etiology than those with mild mental retardation. Because of this and the more obvious developmental delays, moderate mental retardation is usually recognized during early childhood.

Severe and Profound Mental Retardation

Severe and profound mental retardation are associated with IQ scores of 20–25 to 35–40 and below 20 or 25, respectively. Most of these individuals will be identified in infancy owing to known etiology and significant developmental delay. Their learning and behavior deficits are usually so substantial that obtaining a reliable score on an IQ test is difficult. Individuals with severe and profound mental retardation often present with major health-related problems (e.g., epilepsy) and additional sensory and physical impairments, which complicate assessment and intervention.

3.2.2.2 Levels of Support

The American Association on Intellectual and Developmental Disabilities has moved away from the classification in terms of severity, based largely on IQ scores, to one focused on the types and amounts of required supports (Luckasson et al., 2002). Four levels of support are identified: Intermittent, Limited, Extensive, and Pervasive. These categories represent a continuum ranging from brief periods of targeted intervention at specific times, such as teaching interview skills when seeking employment (Intermittent) to more constant, ongoing, and life-sustaining support across all areas of functioning (Pervasive). Levels of support do not necessarily correspond to severity of mental retardation. Instead, level of required support should be based on assessed needs, which are likely to change over time. An adolescent with mild mental retardation might, for example, require extensive supports for a short period of time to address emerging problem behaviors. After this, only intermittent supports might be necessary to maintain treatment gains.

3.3 Maintenance Factors of Mental Retardation

The types of clinical problems that negatively affect independence and quality of life for children and adolescents with mental retardation can be conceptualized in terms of behavioral deficits and excesses (Lovaas, 2003). Deficits are likely to be present in the communication, social, daily living, play and leisure, and fine and gross motor domains (Sparrow, Cicchetti, & Balla, 2005). Behavioral excesses include self-injury, aggression, property destruction, tantrums, hyperactivity, and stereotyped movements. It is important to note that the specific domains affected and the nature and extent of the presenting deficits and excesses will vary considerably from individual to individual. Still, behavioral deficits and excesses tend to be more obvious and significant as the severity of mental retardation increases (Schroeder, Tessel, Loupe, & Stodgell, 1997). Numerous factors interact to maintain the behavioral deficits and excesses of individuals with mental retardation. These factors include genetic syndromes, learning impairment, operant conditioning, environmental impoverishment, and social barriers.

3.3.1 Genetic Syndromes

Mental retardation is associated with a large number of genetic syndromes, such as Down, Fetal Alcohol, Fragile X, and Angelman syndrome (Percy et al., 2007). Many of the known genetic syndromes are associated with a distinct pattern of behavioral deficits or excesses. For example, recognizing that an individual has Fetal Alcohol syndrome indicates a likely pattern of symptom presentation and associated characteristics (e.g., hyperactivity, speech impairment, and sensory impairment) (Burd, Cotsonas-Hassler, Martsolf, & Kerbeshian, 2003). Many syndromes also have a unique behavioral phenotype (e.g., self-biting in Lesch-Nyhan syndrome), prognoses (e.g., regression in Rett syndrome), and intervention requirements (e.g., diet management in Prader-Willi syndrome). Recognition of syndrome-specific behaviors, prognoses, and intervention needs is vital for clinical management (Harris, 1987).

3.3.2 Learning Impairment

Children and adolescents with mental retardation do not learn as easily or as quickly as their typically developing peers (Jensen & Rohwer, 1968). In particular, they seem to have considerable difficultly in gaining knowledge of the world via more symbolic or social learning processes, such as incidental learning, verbal instruction, modeling, and observational learning (Remington, 1996). To some extent, this difficulty stems from attending to irrelevant aspects of the environment and over-reliance on adult cues, phenomena known as stimulus over-selectivity (Wilhelm & Lovaas, 1976) and outer-directedness (Turnure & Zigler, 1964), respectively. Impairments of symbolic learning potentially indicate the need for more direct and systematic instruction to promote learning (Snell & Brown, 2006).

3.3.3 Operant Conditioning

Behaviors, such as aggression, self-injury, and tantrums, are often maintained by specific types of reinforcing consequences such as (a) contingent attention from adults, (b) access to preferred objects and activities, and (c) escape from non-preferred activities (Carr, 1977; Iwata et al., 1994). These behaviors may persist because the individual has difficulty learning appropriate alternatives (Sigafoos, Arthur, & O'Reilly, 2003). Identifying operant contingencies that evoke and maintain behavioral excesses is an important component of clinical practice for individuals who present with severe problem behavior.

3.3.4 Environmental Impoverishment

Numerous studies have implicated impoverished environments in the maintenance and exacerbation of the cognitive impairment and behavioral deficits and excesses associated with mental retardation (Hart & Risely, 1995; Horner, 1980; Skeels & Dye, 1939). The child's environment and experiences can be impoverished both socially and physically. Lack of stimulation, poor health care and nutrition, and unresponsive or abusive parenting are potential maintenance factors in mental retardation. Sensory impairments can also lead to deprivation of experiences

that can maintain and exacerbate learning and behavior problems. By implication, the impact of such factors should be lessened by creating more stimulating, responsive, and nurturing environments and relationships.

3.3.5 Social Barriers

The mental retardation label can be stigmatizing and lead to negative attitudes, lowered expectations, and restricted opportunities (Krajewski & Flaherty, 2000; Rosenthal & Jacobson, 1968). Increasing technological complexity, which demands a high level of cognitive ability, is another potential barrier to participation (Brown, 2007). Clinical efforts to improve attitudes and behaviors may limit the extent to which the person is handicapped by such barriers. For example, a severely retarded child may be unable to talk, but she will be less handicapped if she can be taught manual signs and if others in her environment accept this alternative form of communication. Fortunately, clinical psychologists can draw on a range of evidence-based treatment approaches to lessen the impact of the various bio–psycho–social factors that maintain the behavioral deficits and excesses associated with mental retardation.

3.4 Evidence-Based Treatment Approaches

Evidence-based practice involves the use of treatment approaches that have been validated through scientific research. A number of treatment approaches have been scientifically validated for improving the functioning of individuals with mental retardation. Competence in the clinical application of these approaches is likely to enhance the quality of life for children and adolescents with mental retardation and their families. The range of contemporary evidence-based treatment approaches includes: (a) behavioral intervention, (b) cognitive behavior therapy, (c) family therapy, (d) early intervention, (e) special education, (f) supported employment, and (g) pharmacological treatments.

3.4.1 Behavioral Intervention

Since the 1960s, applied research has repeatedly demonstrated the efficacy of behavioral intervention for improving the functioning of individuals with mental retardation (Thompson, 1977). Behavioral intervention involves application of empirically validated principles of learning to produce changes in socially significant behaviors. Behavioral intervention is associated with the more general paradigm of applied behavior analysis (Baer, Wolf, & Risley, 1987). Applied behavior analysis evolved from operant research into basic learning processes such as shaping, chaining, fading, and differential reinforcement. These and other operant principles have been adapted to create a large number of behavioral procedures, which have in turn been applied to teach a wide range of adaptive skills to individuals with mental retardation, including communication, academic, social, self-care, daily living, play, leisure, community living, and vocational skills (Duker, Didden, & Sigafoos, 2004). Behavioral procedures have also proven highly effective in the treatment of aggression, self-injury, stereotyped movements, and other excess or aberrant behavior (O'Reilly et al., 2007).

Overall, behavioral intervention is a well-established approach for addressing the behavioral deficits and excesses of individuals with mental retardation. This approach has considerable external validity, with demonstrated applicability to infants, children, adolescents, and adults with mild, moderate, severe, and profound mental retardation of varying etiologies. The expertise and support required to effectively implement such treatments will vary depending on the individual client, the skill areas being addressed, and the specific techniques that make up the overall treatment package (e.g., extinction, errorless learning, response shaping). When appropriate intervention targets are identified via careful assessment (Matson & Wilkins, 2007), skillfully implemented behavioral intervention can greatly improve the quality of life for children and adolescents with mental retardation.

3.4.2 Cognitive Behavior Therapy

Cognitive behavior therapy (CBT) has been used with some success in clinical practice for individuals with mental retardation (Dagnan & Lindsey, 2004). The CBT approach is based, in part, on the theory that dysfunctional thoughts, beliefs, self-perceptions, and feelings may underlie some of the problems of adjustment that affect people's lives (Beck, 1976). Typically, as part of CBT, the person might need to learn to identify the dysfunctional cognitions and then learn to adopt alternative thoughts, beliefs, and feelings to deal with problematic situations. By adopting the alternative cognitions, the individual will hopefully show better psychosocial adjustment.

CBT has been used to address a variety of issues that can negatively affect the quality of life for individuals with mental retardation. Examples of areas in which CBT has been successfully applied include anger management, emotional awareness and regulation, and the treatment of depression and anxiety (Lindsey, Neilson, & Lawrenson, 1997). A variety of useful self-management strategies (e.g., identifying the target behavior and its triggers, practicing appropriate responses, and seeking feedback on performance) could also be viewed as being consistent with the CBT approach (Harchick, Sherman, & Sheldon, 1992). Development of self-management skills has enabled many individuals with mental retardation to maintain improved social skills and reach higher levels of academic and vocational performance. Through self-management, some individuals might also learn to control aggressive outbursts (cf. Allen, 2000).

CBT seems to require a high degree of verbal interaction between therapist and client, making the approach perhaps more suitable for individuals with mild mental retardation. Even then, clinicians often need to simplify the therapeutic process to ensure comprehension. For example, children and adolescents with mental retardation will first need to learn how to label and identify emotions before learning how to accurately report and describe their own emotional responses to specific situations (Dagnan, Jahoda, & Stenfert Kroese, 2007). Still, with appropriate adaptations, some children and adolescents with mild mental retardation may be able to benefit from CBT (Willner & Hatton, 2006).

3.4.3 Family Therapy

Parenting a child with mental retardation can be stressful, but does not necessarily lead to inevitable family breakdown (Blacher & Baker, 2002). Indeed, there are a variety of family therapy

approaches that can help reduce stress and prevent family dysfunction (Jackson & Leonetti, 2001). One approach aims to increase knowledge by providing parents with educational information about mental retardation. This type of parent education has been delivered via workshops, lectures, and dissemination of printed information. The effectiveness of parent education seems to depend on the timeliness of information and extent to which the program builds parental confidence (Abidin, 1980). A second approach focuses on developing specific parental skills, such as training parents to manage child behavior problems (Sanders, Mazzucchelli, & Studman, 2004) or respond to emerging child language (Yoder, Warren, McCathren, & Leew, 1998). While competency-based training of specific parent skills can be highly effective for certain families (Kazdin, 1997), not all of the problems that families experience are related to a lack of specific parenting skills. In addition, there has been relatively limited research on sibling issues and diversity, in terms of culture and non-traditional families. Consequently, clinical psychologists may need to consider individualized counseling to support diverse families struggling with issues such as sibling adjustment, parent psychopathology, socioeconomic disadvantage, and limited social supports.

3.4.4 Early Intervention

Developmental delays should be identified as soon as possible so that the child can receive effective early intervention services. Effective early intervention programs typically include a combination of general environmental enrichment, behavioral intervention, family therapy, educational programming, and speech, occupational, and physical therapies. While such services may not necessarily prevent mental retardation (Gilhousen, Allen, Lasater, Farrell, & Reynolds, 1990), there are several evidence-based early intervention programs with demonstrated efficacy for improving child and family functioning (Baker & Feinfield, 2007; Feldman, 2004; Guralnick, 1997; Mahoney, Perales, Wiggers, & Herman, 2006).

One particularly effective approach, known as early intensive behavioral intervention, consists of 25–40 h per week of behavioral intervention with treatment continuing for 2 or more years. Treatment goals generally focus on developing the child's imitation and discrimination abilities and teaching adaptive behaviors (e.g., communication, social, play, and academic skills). Several outcome studies involving children with autism or developmental delay and low initial IQ scores have shown that this form of early intervention can produce clinically significant and long-term improvements in both intellectual and adaptive behavior functioning (Lovaas, 1987; McEachin, Smith, & Lovaas, 1993; Remington et al., 2007; Sallows & Graupner, 2005).

3.4.5 Special Education

In the United States, under the Individuals with Disabilities Education Act of 1997 (IDEA-97), children with mental retardation and other disabilities have the right to a free and appropriate public education in the least restrictive environment. Successful inclusion of children with mental retardation in the least restrictive environment will often require special education to promote academic achievement and develop age-appropriate behavior. Academic achievement among students with mild to moderate mental retardation can often be improved using direct

instructional strategies (Adams & Carnine, 2003). With direct instruction, the teacher presents discrete and repeated opportunities for learning and provides cues and feedback until the child reaches a high level of fluency.

Direct instruction is often combined with ongoing evaluation of the child's performance using valid curriculum-based measures (e.g., percentage of words spelled correctly during brief daily spelling tests). Students with more severe levels of mental retardation will benefit from a functional curriculum that targets improvement of self-care, social, communication, and other adaptive behaviors. These behaviors can be effectively taught using systematic instructional strategies, such as task analysis, response prompting, prompt fading, and reinforcement (Snell & Brown, 2006). In addition to systematic instruction across a range of adaptive behavior domains and academic areas, some children will require more intensive behavioral intervention to promote social interaction, participation, and appropriate behavior (Duker et al., 2004).

3.4.6 Supported Employment

A variety of supported employment approaches have been developed for adolescents and young adults with mental retardation. The intensity of support ranges from initial help in securing employment (e.g., job searching and effective interviewing) to teaching specific job skills (Inge & Moon, 2006). Such services are often provided as part of the child's overall educational program or through funded vocational rehabilitation programs. The same types of behavioral and educational strategies that are used to teach adaptive behaviors (e.g., communication, self-care, and daily living skills) are also effective for teaching a variety of employment-related and specific job skills. While acquisition of employment-related and specific job skills is certainly important, many employment placements fail due to lack of social skills (Wehman, 1996). Thus, social skills training should be included as part of supported employment programs (Matson & Wilkins, 2007).

3.4.7 Pharmacological Treatments

Psychotropic medications are widely used in the treatment of people with mental retardation (Morgan, Campbell, & Jackson, 2003). Various medications, including antidepressants, antipsychotics, and mood stabilizers, have been used to treat comorbid psychiatric disorders and manage severe behavior problems. In a recent review of this literature, Deb et al. (2008) noted that while there is some support for use of psychotropic medications for people with mental retardation, methodological problems make it difficult to fully evaluate the efficacy of such medications when used on individuals with mental retardation. Clinical psychologists working in the area of mental retardation are likely to have individuals on their caseloads receiving these types of medications and can contribute to the evaluation of such treatments by collecting data on relevant target behaviors (e.g., symptoms of depression, and frequency and severity of problem behavior) and monitoring drug side effects. To this end, several assessment scales have been developed to assess the effects and side effects of psychotropic medications in individuals with mental retardation (Aman & Singh, 1994; Matson et al., 1998; Mayville, 2007).

3.5   Mechanisms of Change Underlying the Intervention

Effective use of the evidence-based treatment approaches requires more than skillful implementation of proven techniques or procedures. In addition to competence in the application of a particular treatment approach or specific procedure, effective evidence-based treatment also requires an understanding of the basic mechanisms of change that underlie the approach or procedure. This understanding is necessary for the clinician to effectively modify the intervention plan to suit the unique characteristics of the client and context (Linscheid, 1999). Because mental retardation is not a homogeneous condition, there is often a need to modify and troubleshoot the intervention plan and procedures in light of the person's unique characteristics, circumstances, and response to treatment.

Kazdin (2007) stressed the importance of identifying mechanisms of change that underlie evidence-based psychotherapies. In this context, Kazdin emphasized the need to identify intervening variables, such as genetic syndrome or severity of mental retardation, that can influence or moderate the magnitude of treatment effects. Consideration of intervening variables should enable clinicians to select treatment approaches that are suited to the individual's characteristics. Kazdin also emphasized the need for more research to identify the basic processes that are directly responsible for the therapeutic effect. Knowledge of these processes or mechanisms of change will facilitate the design of new and more effective treatments.

In the treatment of individuals with mental retardation, clinicians should also consider the mechanisms through which the treatment leads to an enhanced quality of life for those individuals and their family. It is important to note that the precise mechanisms of change often remain unclear. Still, for the several major approaches used in the treatment of mental retardation, plausible change mechanisms can be proposed.

3.5.1   Mechanisms of Change Underlying Behavioral Intervention

Behavioral interventions produce change by increasing or decreasing the probability of behavior through operant conditioning. The conditioning process for teaching new adaptive behaviors includes: (a) manipulating establishing operations (e.g., deprivation) to increase motivation, (b) arranging relevant discriminative stimuli to set the occasion for behavior, (c) evoking behavior in the presence of relevant discriminative stimuli, and (d) arranging ongoing reinforcement on some appropriate schedule to strengthen and maintain behavior. Excess behaviors are made less probable by (a) eliminating the contingencies of reinforcement that maintain the behavior (i.e., operant extinction), (b) building response inhibition through punishment contingences, and (c) teaching replacement adaptive skills that are more efficient than excess behavior at gaining reinforcement for the individual. For operant conditioning to produce enduring changes in the person's behavioral repertoire, clinicians need to teach new behaviors that can be generalized to natural environments and that will continue to produce reinforcement once training has ended (Baer, 1999; Esveldt-Dawson & Kazdin, 1998). Acquisition of new adaptive behaviors and replacement of excess behavior through the mechanisms of operant conditioning improves the quality of life by enabling the individual to participate more fully, appropriately, and effectively in a wider range of home, school, vocational, and community environments.

3.5.2   Mechanisms of Change Underlying Cognitive-Behavior Therapy

The mechanisms of change underlying CBT are presumed to stem from changing a person's dysfunctional thoughts, beliefs, and perceptions. By first working to change the person's negative thoughts, beliefs, and perceptions, it may then be easier to change the person's behavior in specific situations. For example, if an adolescent with mild mental retardation has few friends at school and believes that this is because his classmates hate him, then he is perhaps less likely to initiate any interactions with these peers. By changing his perception from one of being hated to one of simply being unfamiliar to his peers, it may be easier to motivate him to initiate positive interactions with peers. However, Kazdin (2007) noted that the causal direction of change in such therapeutic approaches has been difficult to determine. Instead of changed cognitions leading to meaningful changes in behavior; for instance, it could be the case that changes in behavior are responsible for any changes in the person's thoughts, beliefs, and perceptions. In any event, the overt expression of negative thoughts, beliefs, and perceptions could be conceptualized as a type of excess behavior that would be important to change in its own right. Such changes might be achieved through operant mechanisms (e.g., teaching and reinforcing positive belief statements, extinguishing negative statements, etc.). By reducing expression of negative thoughts, beliefs, and perceptions and concurrently increasing the expression of more positive thoughts, beliefs, and perceptions, clinicians may be able to enhance some of the more subjective aspects of the person's quality of life.

3.5.3   Mechanisms of Change Underlying Family Therapy

One mechanism of change underlying family therapy is based on the reciprocal nature of parent–child interactions. That is the notion of changing parent behavior to affect changes in the child's behavior. Problem behavior, for example, often leads to a pattern of coercive parent–child interactions that can negatively affect family functioning (Patterson, 2002). With respect to adaptive behaviors, some children might fail to show gains in this area if parents provide few learning opportunities or complete tasks for the child, rather than facilitating child independence. This pattern of dependence also increases the burden of care for parents, which may in turn increase stress and reduce the quality of life (Woolfson & Grant, 2006). Breaking any coercive patterns of interaction and boosting the parents' confidence in their ability to promote child independence are two important ways in which family therapy seeks to improve the quality of life for children and adolescents with mental retardation and their families.

3.5.4   Mechanisms of Change Underlying Early Intervention

Early intervention often aims to improve general intellectual functioning by (a) increasing environmental stimulation and parent responsivity, (b) improving nutrition and health, (c) teaching adaptive behaviors, and (d) enhancing motivation. This combination of foci is presumed to boost IQ and thereby prevent or attenuate the severity of mental retardation (Gilhousen et al., 1990). There is some evidence to support such possible change mechanisms. Outcome studies on the effects of early intensive behavioral intervention for children with

developmental delay, for example, have consistently demonstrated positive changes in IQ scores (Lovaas, 1987; McEachin et al., 1993; Remington et al., 2007; Sallows & Graupner, 2005). Matson (2007a), however, cautioned that the reported changes in IQ scores might not necessarily stem from a general increase in intellectual functioning. Instead, such changes might reflect increased compliance and teaching to the test. Interestingly, increases in IQ scores from early intensive behavioral intervention are not always accompanied by significant improvements in critical areas of adaptive behavior functioning, such as communication and social skills (Remington et al., 2007).

3.5.5 Mechanisms of Change Underlying Special Education

Special education aims, in part, to improve a child's ability to profit from education. No one mechanism of change underlies special education practice. Instead, special education programs tend to adopt a variety of treatment approaches that are often fairly loosely related to behavior analytic principles. Direct, systematic, and intensive instruction, for example, is intended to produce enduring changes in the child's behavioral repertoire that will enable children to function more effectively once they exit school.

3.5.6 Mechanisms of Change Underlying Supported Employment

Upon exiting school, quality of life for individuals with mental retardation will depend to some extent on their ability to secure meaningful employment. Supported employment has a positive impact on their quality of life by developing job and employment-related skills that enable them to gain and maintain employment. This in turn produces a steady income, which improves one's objective quality of life. For individuals with mental retardation, doing well in a steady job – which often requires ongoing support – can also increase self-esteem, which in turn has a positive impact on one's subjective quality of life (Holloway & Sigafoos, 1999). Once in a stable employment setting, ongoing support is provided to develop social skills and build a network of positive social relationships that further enhance the quality of life.

3.5.7 Mechanisms of Change Underlying Pharmacological Treatments

Psychotropic medications are presumed to produce behavior change through two mechanisms: first, by having a corrective or compensatory effect on neurological functioning and second, by direct symptom reduction (Katic & Steingard, 2001). Risperidone, for example, appears to correct serotonin imbalances implicated in psychotic behavior. However, while widely used in the treatment of problem behaviors among individuals with mental retardation, its efficacy for this purpose is questionable (Singh, Matson, Cooper, Dixon, & Sturmey, 2005). With respect to the second presumed mechanism of change, psychotropic medications have demonstrated efficacy for symptom reduction (Luiselli, Blew, & Thibadeau, 2001). Reducing aggressive outbursts via some medication, for example, might then provide a window of opportunity for enabling greater participation in other therapy programs. On the other hand, mechanisms by which

psychotropic medications produce behavioral change in persons with mental retardation could also stem from other processes, such as a general sedative effect. This could make other forms of treatment more difficult to implement in some cases.

3.6   Basic Competencies of the Clinician

The basic competencies required of clinical psychologists working in the field of mental retardation include: (a) referral clarification, (b) initial assessment, (c) case formulation, and (d) developing, implementing, and evaluating evidence-based treatments. Competence in each of these areas is central to effective clinical practice for children and adolescents with mental retardation (Matson, Terlonge, & Minshawi, 2008; Sturmey, 2008). In all aspects of their work, clinicians must of course strive to maintain the highest level of ethical practice.

3.6.1   Referral Clarification

When a referral is made, clinicians should first clarify the nature of the referral. A request to assess the intellectual functioning of a young child showing developmental delay is very different from a request to differentiate between mental retardation and learning disability in an older child who is failing academically. Before taking on a case, the clinician must determine what competencies might be needed and whether she/he has those required competencies. If not, it is of course necessary and appropriate to refer the case elsewhere.

Clarifying a referral requires effective clinical interviewing skills (Lovitt, 1998). For beginning clinicians it can be helpful to develop a checklist of items that need to be covered during the initial referral interview. Often it can be the most basic information that the beginning clinician fails to record (e.g., child's name, age, contact details, history, recent changes in the child's behavior, illnesses, family crises, etc.). The clinician must learn to ask the right questions to the referring agent, seek follow-up information, and rephrase questions as necessary. The referring agent (e.g., parent, teacher) should be allowed to check the clinical summary of the initial referral interview for accuracy.

3.6.2   Initial Assessment

Once a referral has been clarified, the clinical psychologist will need to decide what initial assessments are warranted. A primary role of clinical psychologists has long been the diagnostic assessment of individuals suspected of having mental retardation. In cases where mental retardation is suspected, standardized assessment of intellectual and adaptive behavior functioning is warranted to confirm or rule out the diagnosis. This type of assessment data can also be very useful for prioritizing treatment goals and identifying required levels of support. Clinical psychologists therefore need to be familiar with a variety of psychological assessment techniques (Matson, 2007b), some of which require more expert competences (see Section 3.7: *Expert Competencies of the Clinician*). Assessment of intellectual and adaptive behavior functioning are arguably the two most important and basic competencies of clinical practice in mental retardation.

3.6.2.1 Intellectual Functioning

Selecting and administering IQ tests, and interpreting their results, are basic competencies for professional practice in clinical psychology. MacLean, Miller and Bartsch (2001) and O'Reilly and Carr (2007) reviewed several commonly used intelligence tests for assessing mental retardation. These tests include the (a) Bayley Scales of Infant Development, third edition (BSID-III) (Bayley, 2006), (b) Kaufman Assessment Battery for Children, second edition (KABC-II) (Kaufman & Kaufman, 2004), (c) Leiter International Performance Scale Revised (LIPS-R) (Roid & Miller, 1997), (d) Weschler Preschool and Primary Scale of Intelligence, third edition (WPPSI-III) (Weschler, 2002), (e) Weschler Intelligence Scale for Children, fourth edition (WISC-IV) (Weschler, 2003), and (f) Stanford-Binet, fifth edition (SB5) (Roid, 2003). It is important to note that each of these tests has strengths and limitations that will make each of them more or less suitable in specific circumstances. The BSID-III, for example, is a better choice for assessing young children (1–42 months of age) than the WISC-IV, whereas the Leiter, being a totally nonverbal test, is appropriate for individuals who lack speech.

3.6.2.2 Adaptive Behavior

To complement measures of intellectual functioning, clinical psychologists also need to acquire competence in assessing adaptive behavior and interpreting the results of such assessments. Commonly used measures for assessing adaptive behavior include the *Vineland-II Adaptive Behavior Scales* (2nd ed.) (Sparrow, Cicchetti, & Balla, 2005), *Adaptive Behavior Scale-School Version* (Lambert, Nihira, & Leyland, 1993), *Adaptive Behavior Scale-Residential and Community Version* (Nihra, Leyland, & Lambert, 1993), the *Scales of Independent Behavior* (Bruininks, Woodcock, Weatherman, & Hill, 1996), and the *Adaptive Behavior Assessment System II* (Oakland & Harrison, 2008). Carr and O'Reilly (2007) summarized several commonly used adaptive behavior scales and noted their strengths and limitations. As with IQ tests, clinicians should be aware of these various scales to ensure that they select and use appropriate instruments for the individual case. When interpreting the results of such scales, Dixon (2007) noted that deficits should be assessed relative to chronological age, gender, opportunity, and family and cultural expectations.

3.6.2.3 Assessment for Treatment Planning

In addition to their use in diagnosis and classification of mental retardation, results of intellectual functioning and adaptive behavior assessments can often be of tremendous value in treatment planning. Matson and Wilkins (2007) emphasized the need for clinicians to identify skill areas that would be most important to target for intervention. Along these lines, the extent of deficit in specific areas of intellectual or adaptive behavior functioning can be identified from appropriately administered tests and rating scales. The most substantial or important of these identified deficits could then be targeted for improvement through evidence-based intervention. In determining which areas to prioritize for intervention, clinicians should consider those that are most likely to enhance the individual's quality of life, as well as environmental demands, and family and cultural values. Clinicians will therefore need competencies in using

standardized assessment results not only for diagnostic purposes, but also to inform the content and procedures of individualized treatment plans.

3.6.2.4 Levels of Support

Identification of the types and amounts of needed support for individuals with mental retardation and their families should be guided by the goal to enhance their quality of life. Designing appropriate support services requires a systematic assessment of individual and family needs (Carr & O'Reilly, 2007). Along these lines, Thompson et al.'s (2003) *Supports Intensity Scale* was developed to assist clinicians in identifying the required amounts and types of supports for persons aged 16–70 years. The scale has good psychometric properties for its intended purpose and would certainly enhance other measures of adaptive behavior functioning. Competence in identifying the required levels of supports would no doubt be a clinical advantage for many reasons, including gaining funding for needed services (Carr & O'Reilly, 2007). Assessing levels of support, and indeed all of the above-mentioned assessments, will often need to be repeated in response to changes in the individual's development, as well as changes in family and environmental circumstances.

3.6.3 Case Formulation

Case formulation involves developing an organized summary of assessment data for use in treatment planning (Hersen & Rosqvist, 2008). Unlike other areas of clinical practice, where clients may present with a specific problem (e.g., test anxiety or a phobia), individuals with mental retardation have global deficits across a wide range of functioning areas. Children and adolescents also often present with numerous problem behaviors (Sturmey, 2008). Clinical practice in mental retardation therefore requires competence in linking a wide range of assessment data (e.g., IQ tests, adaptive behavior assessments) to a comprehensive array of services, including, for example, behavioral intervention, family therapy, and special education. In addition to interpreting the results of various types of assessments, clinicians will need to draw out the treatment implications from these assessments and develop specific treatment plans based on sound psychological theory and the best available evidence. To ensure that cases are conceptualized in ways that will enhance the quality of life, clinicians need to consider maintenance factors (e.g., genetic syndromes, learning impairment, operant conditioning, environmental impoverishment, and social barriers) that may moderate the efficacy of any proposed evidence-based treatments. Case formulations will often need to be modified as the child ages and in light of other changed circumstances (development of psychiatric symptoms, transition to high school, etc.).

3.6.4 Developing, Implementing, and Evaluating Evidence-Based Treatments

Once the case has been formulated, the clinician will need to develop more specific treatment protocols. Parents, teachers, and other staff will require training to be able to effectively

implement the treatment protocols. In addition to providing this training, clinical psychologists should evaluate the effects of treatment protocols on child behavior and family functioning.

Developing a treatment protocol involves systematically searching the literature to identify an appropriate evidence-based treatment procedure and then modifying that procedure to suit the unique characteristics of the child and context (Schlosser, 2003). For example, well-established techniques for teaching functional communication to children with severe mental retardation have been widely disseminated in the scientific literature, but the chosen technique may still need to be adapted to ensure success with any particular child (Sigafoos, Arthur-Kelly, & Butterfield, 2006).

The success of any treatment protocol depends on how well it is implemented. This in turn depends on the quality of training provided by the clinical psychologist. Training parents, teachers, and staff to implement treatment protocols can be accomplished using a combination of verbal and written explanation, demonstration, and practice with performance feedback (Wood, Luiselli, & Harchik, 2007). Training on protocol implementation should continue until a high level of treatment fidelity is achieved.

Treatment protocols need to be evaluated to demonstrate their effects on target behaviors. This type of evaluation requires competence in obtaining objective, reliable, and valid data on performance (e.g., frequency of target behaviors) (Kennedy, 2005). Repeated measures of performance in combination with an appropriate single-case experimental design will enable the clinician to evaluate the effects of the treatment program in ways that can demonstrate a functional relation between treatment and positive changes in target behaviors (Barlow & Hersen, 1984).

Evaluation data of this type will often reveal that the treatment program is not having the desired effects. Even well established interventions that are carefully and faithfully implemented, as per the treatment protocol, may fail to produce sufficient treatment gains. Clinicians therefore should be able to quickly identify when the protocol is not working and analyze the nature of any such problems so that appropriate steps can be taken to troubleshoot the floundering program. Data collection for evaluation purposes needs to be frequent, repeated, and ongoing. In some cases, the analysis will reveal technical aspects of the procedures (e.g., the rate of reinforcement) that require modification. In other cases, however, one may need to recognize that continued use of the protocol is unlikely to be helpful.

3.6.5 Ethical Practice

Understanding of the concepts of informed consent, confidentiality, breach of confidence, access to information, and reporting laws and how to apply these concepts in practice are basic competencies required of all clinical psychologists (Sales, DeKraai, Hall, & Duvall, 2008). Application of these concepts can present certain unique ethical challenges for clinical practice in mental retardation. One such challenge arises from the fact that individuals with mental retardation are often unable to fully comprehend and hence provide informed consent to assessment and treatment. This raises problems in relation to gaining assent and promoting self-determination in relation to treatment participation (Baer, 1998). Although this area will continue to present challenges, guidelines for obtaining informed consent exist that can assist clinicians in protecting individual's rights and self-determination (Iacono & Murray, 2003).

Another challenge arises from the fact that a diagnosis of mental retardation can have life-long impact for the individual's life course, opportunities, and self-esteem. One potentially detrimental effect is the self-fulfilling prophesy of lowered expectations leading to fewer learning opportunities for learning and less academic achievement (Eikeseth & Lovaas, 1992). In light of this, there may be pressure to avoid or alter the diagnosis to something that might be seen as less stigmatizing. Ethically, clinicians must resist any such pressure and ensure that an accurate diagnosis is followed by appropriate treatment. The diagnosis of mental retardation must be based solely on objective, reliable, and valid assessment data, not on any social or political factors.

A final issue that touches on ethical issues relates to the disclosure of the diagnosis of mental retardation. It is important to realize that when a child is referred for psychological assessment, the parents may be unprepared for a diagnosis of mental retardation (Blacher, Feinfield, & Kraemer, 2007). When a diagnosis of mental retardation is appropriate to make based on objective, reliable, and valid assessment data, then the results must be fully and openly disclosed to the parents. This news can be understandably disturbing to parents, and so it must be conveyed with empathy, but not false hope. Parents deserve and appreciate clear and accurate information about their child's diagnosis and what it means for family and child functioning. When informing parents that their child meets the definition for a diagnosis of mental retardation, clinicians should be prepared to offer sound, evidence-based advice about etiology, prognosis, and treatment options. Provision of parent-friendly information can be useful for this purpose, but many parents may need time to adjust to the diagnosis before this type of supplementary information is appreciated.

3.7 Expert Competencies of the Clinician

Enhancing the quality of life for children and adolescents with mental retardation and their families often requires ongoing assessment and treatment. This reflects the fact that mental retardation is pervasive and chronic, affecting multiple areas of functioning throughout the lifespan. Providing ongoing support will often require a level of expertise that moves beyond the basic competencies considered in the previous section of this chapter. Working with children and adolescents from diverse cultural backgrounds, for example, requires expertise in culturally sensitive practices. Similarly, expert competence is required when children present with severe excess behavior or profound and multiple impairments. The demands that arise in relation to each of the areas complicate the provision of ongoing assessment and treatment and are therefore likely to require greater clinical expertise.

3.7.1 Culturally Sensitive Practice

In many countries, including the United States, clinicians are increasingly likely to be involved in supporting children and families from diverse backgrounds. Dana (2005) noted that clinicians require expertise in supporting minority, indigenous, immigrant, and refugee families, for example. Vandenberghe (2008) described how the lack of cultural sensitivity could lead to misunderstandings that may negatively impact clinical practice. For example, behaviors interpreted as pathological from the clinician's perspective could in fact be typical and acceptable within the child's family or culture.

Providing effective clinical services to diverse families does not necessarily require that the clinician and client share the same culture (Vandenberghe, 2008). It is important, however, for the clinician to gain an understanding of various cultures and strive for a more culturally sensitive approach to practice. Ideally, this should occur before progressing beyond the initial referral stage.

Understanding and sensitivity can be gained by consulting with stakeholders from the relevant community or culture. For example, assessment of intellectual or adaptive behavior functioning for a child from an immigrant family may require the clinician to work through an interpreter, who understands both the family's language and cultural values. This will require the clinician to gain competence in working collaboratively with individuals from other backgrounds and cultures.

Effective clinical work with diverse families involves more than simply working collaboratively. With respect to diagnostic assessment, for example, it must be remembered that certain IQ tests and adaptive behavior scales might not necessarily be universally applicable. A clinician must therefore gain skills in evaluating the cultural appropriateness of instruments before using these to assess a child's intellectual or adaptive behavior functioning and identifying treatment priorities.

Cultural norms may also influence acceptable treatment practices. Parents with certain cultural or religious beliefs, for example, may be reluctant to implement a recommended evidence-based treatment. In some cases, this may create an ethical dilemma for the clinician. A family might, for example, want the clinician to support them in using unproven or ineffective assessments or treatments. In such cases, the clinician must have the expertise to make judgments about whether or not accommodation of the family's wishes would compromise ethical standards.

Along these lines, Vandenberghe (2008) described four aspects of maintaining ethical standards when working with culturally diverse families: These include (a) being aware of cultural differences (and we would add being aware of cultural similarities), (b) knowing about the child's culture, (c) being able to distinguish culturally acceptable patterns of behavior from the deficits, delays, or excesses associated with mental retardation, and (d) being competent in taking culture into account during the assessment and treatment process.

3.7.2 Treatment of Severe Excess Behavior

Clinical psychologists working in the field of mental retardation will often receive referrals to treat excess or problem behavior in children and adolescents with mental retardation. The general approach of identifying the variables that maintain the excess behavior and then teaching a relevant replacement behavior is usually sufficient for treating the more common types of excess behaviors (e.g., tantrums, noncompliance, disruption, and stereotyped movements) seen in children and adolescents with mental retardation (Sigafoos et al., 2003). Implementing this general approach requires basic competence in behavioral assessment and intervention. Matson et al. (2008) described the basics of this general assessment to intervention model for the treatment of excess behavior in individuals with mental retardation. To further facilitate this process, clinicians can draw upon a range of well-established and manualized assessment and intervention procedures that have demonstrated efficacy in the

treatment of excess behavior in children and adolescents with mental retardation (e.g., Carr et al., 1994; Durand, 1990; Sanders et al., 2004).

However, successful treatment of more severe forms of excess behavior (e.g., intense aggression, extreme self-injury, and criminal behavior) will often require a higher degree of clinical expertise than is required for implementing the basic assessment to intervention process represented in these manuals. While effective treatments for severe excess behaviors are also behaviorally based (Foxx, 2001), the design, implementation, and evaluation of such treatments is complicated by the very real potential for serious harm and consequent need for immediate and lasting response suppression (Foxx, 1996, 2003, 2005). Expert competencies are therefore required to assess the risk that severe excess behavior poses to the child and others and to determine when more intrusive treatments are indicated.

3.7.2.1 Risk Assessment

The main purpose of undertaking a risk assessment is to prevent harm (McEvoy & McGuire, 2007). One way to prevent harm from severe excess behavior is to provide effective behavioral treatment. However, behavioral treatments are rarely immediately effective in preventing or eliminating severe excess behavior. Thus, clinicians must consider the risks that the excess behavior represents to the child and others in treatment planning.

Risk needs to be considered in terms of the potential for injury, damage, and other negative effects (e.g., arrest, school suspension, and loss of employment). The form of the behavior does not always equate to the degree of risk or potential for harm. Physical attacks on others for example, could pose only a moderate risk of harm if these attacks have been rare and easily preempted. Frequent and persistent swearing at strangers in the community, on the other hand, might be viewed as having serious potential for harm, including restricting a person's access to the community. McEvoy and McGuire (2007) provided a list of questions that could be adapted to identify and assess the potential for harm from excess behavior (e.g., What could happen if the behavior occurs? Who is at risk if the behavior occurs? Under what conditions is the behavior likely to occur?). Other researchers have developed scales for assessing risk (Lindsey et al., 2008). Competence in the use of such risk assessment approaches is required when individuals present with severe excess behavior.

A risk assessment is also necessary before undertaking a functional assessment to identify the variables that evoke and maintain severe excess behavior. Because some such assessments expose the individual to analog conditions that could provoke excess behavior (Rojahn, Whittaker, Hoch, & Gonzales, 2007), it is important to determine whether the information that can be gained from direct assessment methods outweighs the risk that might arise if excess behavior occurs during the assessment. Clinicians can minimize or prevent this risk by using briefer versions of analog assessments or by using more indirect assessment protocols (Matson et al., 2008).

3.7.2.2 Intrusive Treatments

In some cases, risks associated with excess behavior may warrant the use of more intrusive or restrictive treatments to prevent and reduce severe excess behavior. Certain types of

treatments – including the use of protective equipment, physical restraint, or response-contingent aversive stimulation – have been defined as intrusive and their use is controversial (Repp & Singh, 1990). Many jurisdictions have restricted the use of some such procedures in the treatment of individuals with mental retardation (Sherman, 1991).

However, use of empirically supported intrusive procedures may be justified when the risk is high and when less intrusive treatments have failed (Didden, Duker, & Korzilius, 1997; Duker & Seys, 1996; Foxx, 2005). Obviously clinicians intending to use intrusive treatments must be prepared to justify this decision with evidence, ensure compliance with legal and ethical guidelines, and develop appropriate safeguards. When these conditions can be met, clinicians must gain the necessary expertise to use the procedures prior to implementation. During treatment implementation, clinicians will have to maintain a high degree of oversight and regularly monitor the effects and side effects of treatment (Duker & Van den Munckhof, 2007). The intensity of the required oversight can be demanding and must be considered in the decision to accept referrals for the treatment of severe behavioral excesses.

3.7.3 Profound and Multiple Impairments

Developing treatments to promote greater adaptive behavior functioning is one way by which clinical psychologists enhance the quality of life for children and adolescents with mental retardation and their families. The general approach is to identify the child's adaptive behavior deficits and then directly teach new adaptive skills to address these deficits (Lovaas, 2003). For example, children with mental retardation have been taught a range of adaptive behaviors (e.g., feeding, dressing, and toileting) using task analysis, response prompting, prompt fading, and reinforcement (Duker et al., 2004). Implementing this general approach requires basic competence in undertaking adaptive behavior assessments and implementing evidence-based instructional strategies.

However, this general approach may have limited efficacy for individuals with profound mental retardation and coexisting sensory, physical, or health impairments (Smith, Klevstrand, & Lovaas, 1995). The challenge for clinicians then is how to enhance the quality of life for children and adolescents with profound and multiple disabilities. Addressing this challenge would seem to require a higher level of expertise than is usually required for teaching adaptive skills to children and adolescents with fewer and less severe impairments.

Bailey (1981) noted that clinical practice for individuals with profound, multiple disabilities may require a shift in emphasis from adaptive skill training to stimulation programming. Along these lines, Lancioni and his colleagues have demonstrated how clinicians can make use of assistive technology and operant conditioning principles to provide stimulation while at the same time promoting more active engagement and movement in persons with profound and multiple disabilities (Lancioni et al., 2008a, b). For example, instead of merely exposing the individual to preferred sources of stimulation, a microswitch program may enable the person to obtain stimulation in a more active, self-directed manner (Lancioni et al., 2007a).

Promoting more active engagement is one way to enhance the quality of life for children and adolescents with profound mental retardation and coexisting conditions (Lancioni et al., 2007b). Doing so effectively requires expert competence in an area of practice that has been relatively neglected (Bruzek & Kennedy, 2007). Consequently, clinicians interested in this and

other specialized populations described in this section will benefit from adopting strategies to facilitate their transition from basic competence to expert clinician.

3.8   Transition from Basic Competence to Expert Clinician

The competency-based movement in professional psychology focuses on identifying the domains and levels of required competence (Hatcher & Lassiter, 2007). As noted by Kaslow, Dunn, and Smith (2008), the domains and levels of required competence vary across practice settings and client populations. In the field of mental retardation, the transition from basic competence to expert clinician can be viewed as one way to extend the limits of competence to a wider range of issues. Gaining expert competence in clinical interviewing to assess adaptive behavior, for example, can extend the limits of practice to include more culturally diverse families, whereas greater expertise in behavioral intervention may enable clinicians to more effectively treat individuals with severe behavioral excesses.

The transition from basic competence to expert clinician might be viewed as an ongoing development process (Kaslow et al., 2008; Lichtenberg et al., 2007). That is, there is no point at which a clinician achieves complete expertise. Rather, clinicians should continually seek out new knowledge and professional development opportunities to advance their skills. This developmental view recognizes the fact that mental retardation is a vibrant and evolving area of specialization, where new evidence is continually generating new and more effective practices.

In line with this developmental view, clinicians may benefit from developing a planned and systematic approach for gaining relevant new knowledge and clinical skills. Following successful completion of a clinical training program with practicum and internship experiences in the field of mental retardation, approaches for gaining more expert knowledge and clinical skills include: (a) systematic literature reviews, (b) mentoring, and (c) participation in professional development activities. A planned systematic approach to knowledge acquisition and skill development may help to ensure that clinicians identify relevant new knowledge and skills.

3.8.1   Systematic Literature Reviews

Keeping abreast of the latest and best research evidence is an essential component of evidence-based practice. Clinicians should therefore develop the habit of systematically searching the literature on a regular basis. The purpose of undertaking regular systematic literature searches is to identify high-quality studies relevant to a particular case or clinical practice. Indeed, an important initial step in developing any treatment plan – be it to improve social skills, teach language, or reduce disruptive behavior – is to identify well-established interventions that have been successfully used with similar cases. When relevant studies are identified, clinicians should have the basic competence to appraise the certainty of the evidence and eliminate from consideration any approaches that lack empirical support. When use of a particular approach is well established by a sufficient amount of high quality research, expert clinicians are able to incorporate the evidence-based procedures into their professional practice to improve quality of life outcomes for individuals with mental retardation and their families.

One practical and efficient way to search the literature is through the use of electronic databases, such as PsychINFO and MEDLINE. A PsychINFO search using mental retardation and assessment (or intervention) as keywords and covering only 2007, for example, yielded 187 publications. Clearly, there is a large amount of published literature that could be drawn upon to inform clinical practice. The need to sift through the huge volume of literature highlights the critical need for expertise in the critical appraisal of available research evidence.

At a more advanced level of competence, the transition to expert clinician is marked by the ability to identify emerging trends in the scientific literature and contribute to this literature in line with the scientist–practitioner model of clinical practice (Tryon, 2008). Major advances in identifying genetic syndromes and behavioral phenotypes associated with mental retardation (Oliver et al., 2007), for example, would seem to hold considerable promise for clinical practice. Translating emerging genetic and biomedical discoveries into more effective treatments is likely to require a high level of competence supported by opportunities for interdisciplinary collaboration.

3.8.2   Mentored Experiences

Mentoring in this context refers to seeking out a more experienced colleague for professional guidance, support, and advanced training. Two examples of such experiences include: (a) working collaboratively and constructively with a more experienced team of colleagues, and (b) entering into a more formal training arrangement with experienced colleagues. The purpose of seeking such mentoring experiences is to develop expert levels of competence in one or more specialized clinical skills.

Developing expert competence is more likely when the mentoring experience includes observation of the expert followed by opportunities to practice the skill while receiving performance-based feedback (Lichtenberg et al., 2007). Fluency in clinical skills will often require repeated opportunities to observe the expert and practice the skill while receiving feedback.

Unfortunately such mentoring experiences may be difficult for practicing clinicians to arrange. Difficulties can arise from the fact that there may be a shortage of experts who are willing and able to serve in a mentoring capacity. In addition, many professionals work on an individual basis in their own clinical practice (Hersen, 2004). These clinicians are likely to be isolated from senior colleagues and thus have few available mentors. In such settings, the clinician can gain new knowledge from handbooks and treatment manuals written by recognized experts (e.g., Hersen & Gross, 2008; Hersen & Reitman, 2008; Matson, 2007b) and undertake self-directed practice to gain fluency.

3.8.3   Professional Development

Professional development in this context refers to participation in formal accredited training programs. This may involve accredited university courses or training run by professional organizations, such as the American Psychological Association. The aim of this training is to acquire new knowledge and skills relevant to clinical practice.

This type of professional development training usually occurs over a brief period of time (e.g., a one-semester evening course or a 1–2 day workshop). The evidence for the effectiveness of such training is mixed (Miline, Keegan, Westerman, & Dudley, 2000; Miller, Yahne, Moyers, Martinez, & Pirritano, 2004) and probably depends as much on the quality of the material and presenter as it does on the commitment of the trainee to develop fluency in newly acquired knowledge and skills. There appears to be no shortage of opportunities for professional development training in the field of mental retardation.

Another form of professional development is to become actively involved in relevant professional organizations, such as Division 33 (Intellectual and Developmental Disabilities) of the American Psychological Association. Such organizations provide opportunities to network with experts and access targeted professional development opportunities.

3.9   Summary

Enhancing the quality of life for individuals and families is the overall objective of clinical psychology practice in mental retardation. To achieve this objective, a range of competencies, such as those outlined in this chapter, is required. The present chapter has hopefully contributed to the competency-based movement in professional psychology by articulating some of the basic and expert competencies that will enable clinical psychologists to be more successful in enhancing quality of life outcomes for children and adolescents with mental retardation and their families.

Because of the heterogeneous nature of mental retardation, effective clinical practice in the field requires basic and expert levels of competence. There are numerous causes for mental retardation and varying symptom presentation. For example, individuals with mental retardation can present with mild mental retardation and require only episodic support or with profound mental retardation and coexisting physical and sensory impairments requiring life-sustaining support. The expert clinician can recognize, assess, and treat mental retardation in all its various manifestations.

Mental retardation is pervasive and chronic. Because of this, many individuals with mental retardation require ongoing support across a range of settings (e.g., clinic, home, school, community, and vocational settings). A competent clinician must therefore be able to work from a lifespan perspective and coordinate services across multiple settings.

The two main areas of clinical practice in mental retardation are (a) diagnostic assessment and (b) evidence-based intervention to promote improved adaptive behavior functioning. To this end, clinicians can draw upon a range of evidence-based assessment and treatment approaches. This is a challenging task, as the heterogeneity of mental retardation means that clinicians will often have to adapt assessment and intervention strategies to suit the unique characteristics of the individual and context. Making effective adaptations of this sort requires a thorough understanding of the foundational principles that underlie evidence-based assessment and treatment approaches (Linscheid, 1999).

The transition from basic competence to expert clinician can expand the limits of one's practice to a wider range of clinical problems and issues. Expert competences are certainly needed to (a) work effectively with diverse families, (b) treat severe excess behavior, and (c) enhance participation of individuals with profound, multiple disabilities. To make this transition, a conscientious effort to keep informed of current literature and develop advanced

clinical skills through mentoring and professional development is required. Professionalism demands that clinicians strive to make the transition from basic competence to expert. Clinicians can be confident that their efforts to gain expertise in this challenging, but rewarding, field can greatly enhance the quality of life of individuals with mental retardation and their families.

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4   Autism Spectrum Disorders

Cynthia R. Johnson

Abstract: Autism Spectrum Disorders (ASD) are biologically based, neurodevelopmental disorders of childhood onset characterized by significant impairment in social interactions and communication as well as restricted or stereotyped patterns of behavior and interests (American Psychiatric Association, 2000). As many as one in 150-500 children are affected (Center for Disease Control and Prevention, 2007; Fombonne, 2003). With the increased prevalence of ASD, many clinical psychologists will be charged with providing services to these children, adolescents, adults, and their families. In fact, the training of the needed services providers to serve this group of individuals has been the topic of national discussion (National Research Council, 2001). Clinically, the roles for this population fall primarily into 1) screening and referral services, 2) diagnostic services, 3) treatment development, delivery, and evaluation, 4) oversight and supervision of treatment delivery, 5) staff training, 6) parent education and training, and 7) consultation and staff training services. Given the heterogeneity of ASD, clinical competency across all ages, all functioning levels, and all levels of severity entail a broad range of professional skill sets. This chapter will provide an overview of ASD, the clinical roles in serving individuals with ASD, and then more detailed information about both basic and expert competencies required to in the delivery of these services.

4.1   Overview of Autism Spectrum Disorders

Autism Spectrum Disorders (ASD) are biologically based neurodevelopmental disorders of childhood onset characterized by significant impairment in social interactions and communication, as well as restricted or stereotyped patterns of behavior and interests (American Psychiatric Association, 2000). As many as one in 150–500 children are affected (Center for Disease Control and Prevention, 2007; Fombonne, 2003). This prevalence figure is dramatically higher than the previously accepted estimate of 5 per 10,000. The increase in the detected prevalence is due in large part to better community sampling methods, broadening the case definition, and improved diagnostic precision (Fombonne; Yeargin-Allsop et al., 2003).

It was Leo Kanner, a physician at Johns Hopkins, who in a seminal paper coined the word infantile autism in describing a group of 11 children who had a lack of social interest, communication deficits, and a resistance to change (Kanner, 1943). While these disorders share common characteristics of impairment in communication and social abilities along with restricted, repetitive, and stereotyped behaviors, there is considerable variability with respect to the extent and severity of the impairment. Furthermore, ASD very often co-occurs with global developmental delays and intellectual disability introducing additional variability. Between 26% and 75% of children with ASD also meet the criteria for intellectual disability (Chakrabarti & Fombonne, 2001; Joseph, Tager-Flusberg & Lord, 2002). Children with ASD may be functioning in the severe range of intellectual disability but may also be in the superior or gifted range of cognitive functioning. Furthermore, children and adolescents with ASD commonly exhibit

serious behavior problems such as tantrums, aggression, self-injury, hyperactivity, and non-compliance. An estimated 50–70% of children with ASD have co-occurring behavioral or emotional problems (Gadow, Devincent, Pomeroy, & Azizian, 2004; Tonge & Einfeld, 2003).

For children with ASD and their families, the impact of this disorder may be considerable and enduring. Research has shown that parents of children with ASD experience more stress than parents of children with other disabilities or illnesses (Dunn, Burbine, Bowers, & Tantleff-Dunn, 2001; Weiss, 2002). Not only do families have to cope with an often challenging child, but also they are confronted with additional stressors related to ensuring appropriate care for their child, as the barriers are often enormous. These include determining the availability and their eligibility of services typically across a number of service systems (educational, mental health, early intervention, medical subspecialists, etc.). Providing appropriate treatment for the growing number of children identified with ASD has become a challenge to the state and local systems (Croen, Grether, Hoogstrate, & Selvin, 2002).

4.1.1 Current Diagnostic Categories

Within the Diagnostic and Statistical Manual of Mental Disorder: Fourth Edition, Text Revision (DSM-IV-TR; APA, 2000), ASDs are in the group of diagnoses of pervasive developmental disorders and include (1) Autistic Disorder, (2) Asperger Disorder, and (3) Pervasive Developmental Disorder, Not Otherwise Specified (PDD, NOS). Also assumed under this class are two, much rarer disorders, which include (1) Rett's Disorder and (2) Childhood Disintegrative Disorder. While we will provide a description of all the ASDs in the next section, the focus of this chapter will be on Autistic Disorder, Asperger Disorder, and PDD, NOS. In this chapter, we will refer to these three disorders as ASD, as this terminology is now widely used for them.

4.1.2 Overview of Clinical Issues in Autism Spectrum Disorders

With increased prevalence of ASD, many clinical psychologists will be charged with providing services to these children, adolescents, adults, and their families. In fact, the training of the needed service providers to serve this group of individuals has been the topic of national discussion (National Research Council, 2001). Clinically, the roles for this population fall primarily into (1) screening and referral services, (2) diagnostic services, (3) treatment development, delivery, and evaluation, (4) oversight and supervision of treatment delivery, (5) staff training, (6) parent education and training, and (7) consultation and staff training services. Given the heterogeneity of ASD, clinical competency across all ages, all functioning levels, and all levels of severity entails a broad range of professional skill sets. Many psychologists specializing in ASD may focus on few of these clinical roles or focus on a particular age range (e.g., preschoolers).

As with any chronic, complex disorder, challenges of this population are many. Behaviorally, children with ASD can be extremely disruptive and even harmful to others and to themselves. Given the behavioral issues, both assessing and treating these individuals can be quite stressful. Progress in treatment may also be slow despite the best delivery of evidenced-based treatment. Moreover, the support systems for these children to include parents, teachers, and other service providers may be strained and overwhelmed in their roles with the child or adolescent with ASD. Lastly, as children and adolescents with ASD are provided services in a variety of settings

to include early intervention programs, mental health programs, and special education programs, knowledge of service systems and the ability to work with them are essential. Nonetheless, working in the ASD field affords an opportunity to have a dramatic impact on children with ASD, their families, and other service providers. Moreover, it is an exciting clinical area given the rapid, new developments with respect to what we are learning about etiology, earlier diagnostic features, and the development and refinement of treatments to meet the needs of this vastly heterogeneous group.

4.2   Recognition of Symptoms and Their Assessment

In this section, we will discuss criteria for each of the diagnoses under the ASD category. There is a considerable overlap, which is important to recognize but also to understand the differences to make an accurate diagnosis.

4.2.1   Autistic Disorder

This diagnostic label is preserved for the "classic" description of autism. By definition, these children display symptoms in all three categories with a total of at least six symptoms specified across the three categories of impairment: (1) impairment in social interactions, (2) impairment in communication, and (3) restricted repetitive and stereotyped patterns of behavior, interest, and activities. In the first category where two symptoms must be present, noted impairment in nonverbal social behaviors such as use of eye contact and use of gestures is required. While lack of eye contact is considered a hallmark of autism, children with autism also display deficits in other nonverbal social behaviors, such as the use of joint attention and facial expressions. Lack of the use of an index point has been found to be a very salient early arising deficit. Further, limited social reciprocity is a key feature of the overall social impairment. That is, there is a lack of understanding of the reciprocal back and forth nature of interacting with others. In the second category, behaviors include lack of speech development, atypical use of language to communicate, repetitive or idiosyncratic use of language, and lack of imitative play. Children with autism, as well as other ASD often display echolalic speech (repeating what they have heard), repetitive repeating of what they have heard from TV shows, videos, or other sources (often referred to as "scripting"). Many children with autism and other ASD develop none or a limited repertoire of functional speech.

What is commonly referred to as "third category" behaviors include many of the ubiquitous behaviors associated with autism, such as stereotypical body movements, attendance to a part of an object (spinning the wheels of a car or train), strong adherence to specific routines and rituals, and keen, unusual, and restricted interests. Children with autism may become extremely distressed when their need for sameness is not honored, leading to disruptive behaviors.

4.2.2   Asperger Disorder

Soon after Kanner described infantile autism, an Austrian pediatrician, Hans Asperger, described a small group of children who had strong cognitive and language skills, but who

nonetheless had social deficits, keen, and unusual interests and some motor "clumsiness" (Asperger, 1944). Also noted was a family history of such behavioral differences. Currently, DSM-IV diagnostic criteria include a qualitative impairment in social interactions and restricted, repetitive, and stereotyped patterns of behaviors, interests, and activities. However, by definition, there is no evidence of cognitive or language delay.

Over the last 2 decades, studies examining validity of the differential diagnosis of Asperger Disorder versus high functioning autism has resulted in further characterization of this clinical diagnosis. However, controversy remains over whether Asperger Disorder represents a separate category or is a milder presentation of high functioning autism. Some differences between the two groups have been shown in their cognitive profiles. It is generally accepted that individuals with Asperger Disorder have stronger verbal skills than nonverbal skills, which is opposite of what is held for high functioning autism. Many individuals with Asperger Disorder also have a history of hyperlexia (early, precocious reading abilities). Socially, it is believed that individuals with Asperger Disorder show more interest in social interactions but are unsuccessful due to the misinterpretation/lack of understanding of social cues. Emotionally, these individuals may have difficulty in modulating emotions, in that they may either be over reactive or under reactive to a situation. Similar to individuals with high functioning autism, individuals with Asperger Disorder may be quite literal in their interpretation of language, may be experts on obscure topics, and may have rigid rules about the world.

4.2.3 Pervasive Developmental Disorder, Not Otherwise Specified (PDD, NOS)

This diagnostic category is applicable for those individuals who display many of the characteristics of Autistic Disorder or Asperger Disorder, but have milder and fewer symptoms. In fact, it is often described as "mild autism." It is generally believed the prognosis is better (Gillberg, 1991). This diagnosis may also be used when there is not sufficient information gathered during the diagnostic process to determine a more specific ASD diagnosis.

4.2.4 Rett's Disorder

Rett's Disorder is a relatively rare disorder with a much lower incidence than other ASD and is believed to affect one in every 10,000–15,000 live female births. Rett's Disorder was first described by a physician in Austria in the 1960s and is characterized by apparent typical development followed by a period of loss of skills. Loss of skills includes loss of motor tone (hypotonia), which includes the loss of use of hands as well as the loss of speech abilities. While age of regression varies during the preschool years, the loss of skills can be quite sudden and dramatic. Loss of purposeful hand use is usually associated with the observation of repetitive hand wringing at midline. Other early symptoms include difficulty in crawling or walking and low levels of eye contact. Further behavioral characteristics associated with Rett's Disorder include bruxism (teeth grinding), chewing difficulties, seizures, and a wide-based gait when able to walk. Growth parameters, particularly head circumference, are usually slowed with onset.

Respiratory difficulties such as apnea, hyperventilation, and aerophagia (air swallowing) are commonly observed. Given some of the overlapping behavioral characteristics, such as limited eye contact, and repetitive behaviors, Rett's Disorder may be mistaken for autism or PDD, NOS. Most girls with Rett's syndrome have intellectual disabilities. Rett's Disorder is now known to be a genetic disorder with two genes implicated. Given the rarity of Rett's Disorder, much less is known about the long-term prognosis.

4.2.5 Childhood Disintegrative Disorder (CDD)

Even rarer than Rett's Disorder is Childhood Disintegrative Disorder. This disorder was originally described by Theodore Heller, a special educator, in 1908 (Heller, 1908). These children display behaviors consistent with autism, but after a longer period of typical development (3–5 years of age). A regression in skills is followed by minimal recovery of these skills. Hence, there is a difference in onset, and it is also believed the course and prognosis are different (Volkmar, Koenig, & State, 2005). These children may develop typical language, display social interests, and accomplish toilet training and other self-care skills. With the onset of CDD, loss of these skills is evidenced along with a general loss of interest in their environment. It is estimated that less than 2 children per 100,000 who are diagnosed with an ASD have CDD. These children are often evaluated for other neurological diseases and disorders because of the pronounced loss of skills. Prognosis for CDD is much more guarded than for Autistic Disorder, Asperger Disorder, and PDD, NOS.

4.2.6 Assessment of ASD

Assessment of ASD requires several levels. Clinical psychologists may be involved in a few if not all of these levels. Knowledge of best practices at each of these levels should be acquired consistent with clinical roles accepted.

4.2.6.1 Screening of ASD

With the growing evidence that early intervention at young ages can improve long-term outcome, the importance of screening for signs and symptoms has become increasingly paramount. The importance of screening has been the focus of several professional groups (American Academy of Pediatrics, 2007; Filipek et al., 2000; National Research Council, 2001). The American Academy of Pediatrics published a comprehensive resource toolkit to assist health care professionals in screening for children with ASD. It includes several screening measures that have been widely used. These include the Checklist for Autism in Toddlers (CHAT) (Baron-Cohen, Allen, & Gillberg, 1992), the modified-CHAT (Robins, Fein, Barton, & Green, 2001), and the Pervasive Developmental Disorders Screening Test (Siegel, 1996). Pediatricians and other primary care physicians involved in the care of young children have increasingly adopted the use of screening measures in their practices. If a child is screened to be at risk for ASD, a referral for a diagnostic assessment is warranted.

4.2.6.2 Diagnostic Evaluation

In light of the prevalence rates, it is not surprising that numerous children are referred for diagnostic evaluations of ASD. This group of disorders requires special considerations with respect to evaluation practices. Given the pervasive delays and deviances in multiple developmental domains in ASD, comprehensive assessments are best met with a multidisciplinary team of professionals. At the first step of a comprehensive evaluation, the diagnostic portion typically involves a direct interview with the parent/caregiver. The purpose of this interview is to gather detailed information on early medical history, the developmental course of the child, current and past communication abilities and differences, social functioning, level of play and leisure skills, acquisition of self-care skills, and the presence of atypical and challenging, disruptive behaviors. A parallel step in the diagnostic process is direct observations of the child. Observations of the child should optimally occur under various conditions (unstructured play, structured adult directed activity) and across settings (clinic, home, preschool/school). When the diagnostician is not able to gather much information directly, gathering information from others who observe the child is important.

4.2.6.3 Assessment of Cognitive, Neuropsychological and Adaptive Functioning

Psychologists may play a critical role in the diagnostic process, but also in other areas of assessment that are important to further understand the child and family and their intervention needs. These include administration of both standardized cognitive and neuropsychological measures as well as adaptive behavior measures. Understanding a child's cognitive strengths and weaknesses is imperative in treatment planning. For individuals with ASD who are higher functioning, neuropsychological testing to include measures of executive functioning is often warranted to discern differences in information processing. With the consistent finding that adaptive functioning in children with ASD is lower than their cognitive functioning, assessing these skill deficits is important in intervention planning.

4.2.6.4 Assessment of Communication and Language Skills

Discernment of communication and language skills is critical in evaluating the individuals with ASD. Communication assessment not only involves assessment of spoken speech, but prelinguisitic, nonverbal behaviors. In fact, it is the delay or deviance in nonverbal communication behaviors, which is more associated with ASD than the delay in expressive, verbal communication skills.

4.2.6.5 Behavioral Assessment and Behavioral Functional Assessment

Behavioral assessment in this population includes first the quantification of the behavioral concerns as well as the evaluation of co-morbid conditions, such as anxiety and depression. In planning for "functionally derived" interventions (behavioral interventions will be discussed

in a later section), a functional assessment of behavior is commonly conducted. The goal of the functional behavioral assessment is to identify the variables that contribute to the target behavior (Carr et al., 1999; Horner & Carr, 1997; Horner, Carr, Strain, Todd, & Reed, 2002). This involves comprehensive examination of underlying motivations, or functions, of the child's interfering behaviors. A functional behavioral assessment should identify environmental influences for particular, well-defined target behaviors. The environmental variables assessed include antecedents and consequences that may be contributing to or maintaining the behaviors. Antecedents assessed include details on what is happening prior to the behavior (e.g., who is present, what activity is taking place), what the setting is (e.g., classroom, recess), and possible physiological influences (e.g., illness, hunger). Consequences assessed include the outcome of the behavior, such as whether the child "escapes" the situation, receives the attention of adults or others, receives a preferred object, or is allowed to continue an activity.

4.2.6.6 Assessment of Sensory Features

Atypical sensory behaviors are observed in a large percentage of individuals with ASD (Baranek, Parham, & Bodfish, 2005). These include hypersensitivity or hyposensitivity to sensory input from the environment. Atypical responses occur across sensory modalities to include visual, auditory, tactile, proprioceptive, and olfactory. While not a core feature, assessment of these sensory behaviors may aid in treatment planning. Recent development of tools to assess this area is now available.

4.2.6.7 Assessment of Parental Stress and Family Functioning

Given the added burden and related stress placed on parents and family members caring for a child or adolescent with ASD, assessing these areas is important. There are several measures used in ASD.

4.3   Maintenance Factors of ASD

There are a number of contributory factors that play a role in the delays and deficits observed in ASD as well as the behavioral challenges such as aggression, tantrums, and atypical behaviors (e.g., ritualistic behaviors, stereotypical behaviors, etc.). While presented separately, they overlap in their impact on the individual with ASD.

4.3.1   Neurodevelopmental Factors

Early features of ASD include atypical use of eye contact (Rogers, 2001), lack of or diminished joint attention (Leekam, Lopez, & Moore, 2000; Mundy & Gomes, 1998), delayed emergence of other early communication skills (Charman et al., 1998), deficits in symbolic play (Charman et al., 1988), and deficits of imitation abilities (Rogers, Hepburn, Stackhouse, & Wehner, 2003). These early emerging deficits are believed to disrupt subsequent developmental stages in social,

language, and cognitive domains. Joint attention has been strongly correlated with later vocabulary development (Tomasello, 1995) along with social development. Imitation of familiar gestures is correlated with language comprehension (Abrahamsen & Mitchell, 1990). Symbolic play requires some level of "symbolism" and has been linked to the mastering of early cognitive skills. Strong evidence suggests that lack of imitation is related to later impairment in self-understanding and the social understanding of others (Sigman, Dissanayake, Arbelle, & Ruskin, 1997). Use of delayed imitation, pretend play, referential gestures, and words typically emerge in the second year of life and are considered signs of early conceptual abilities (Travis & Sigman, 2001). These early behaviorally observed impairments are speculated to in turn adversely impact subsequent brain development (Dawson et al., 2002; Mundy & Neal, 2001).

4.3.2 Abnormal Brain Development

Atypical brain development is posited to cause the atypical development and behaviors in ASD. With the advent of neuroimaging technology along with a few neuropathological studies, much has been learned in the past 15 years about atypical brain growth in early life (Courchesne, Carper, & Akshoomoff, 2003), likely reduced connectivity between brain regions (Vidal et al., 2006), and differences at a cellular level (Cassanova, Buxhoeveden, Switala, & Roy, 2002).

4.3.3 Genetic Factors

There is accumulating data to implicate ASD as a complex genetic disorder. Not only is there a great increased risk within families to have another with ASD when there is a sibling affected, there is substantial different concordance rates between monozygotic twins (over 90%) compared with dizygotic twins (10%) for ASD (Bailey et al., 1995; Jorde et al., 1991). While a few single genes have been associated with ASD, it is more probable that multiple genes will be found to be implicated. Behavioral features of ASD are often observed in a few identified genetic syndromes such as Fragile X syndrome. Genetics is presently a very active area of research in ASD.

4.3.4 Operant/Environmental Factors

As discussed in the section on Behavioral Assessment, environmental factors may greatly attribute to the maintenance of both behavioral excesses (aggression, destructive behaviors) as well as behavioral deficits (play skills, communication skills). Identifying operant conditions which either maintain a behavior or thwart the learning of alternative, more functional behaviors are essential in the treatment of ASD. The operant model will again be discussed in the treatment section and has important implications for those with ASD.

4.3.5 Service Delivery Factors

Unfortunately, ready access to comprehensive services is not available in all communities. In fact, there are great disparities in the availability and quality of assessment and treatment

services across the United States. Even within the same region, there may be variation in program availability and quality (Hume, Bellini, & Pratt, 2005). This disparity is fueled by both funding shortfalls and the lack of highly trained personnel issues.

4.4   Evidence-Based Treatment Approaches

Evidence-based practices are interventions which have a knowledge base attesting to their quality and efficacy (Hoagwood & Johnson, 2003). Evidence-based practices are just emerging in ASD. Currently, there are few approaches used in the treatment of ASD and its associated symptoms, which have an empirical base, including interventions based on applied behavior analysis (ABA) (Schreibman, 2000; Smith et al., 2006), comprehensive educational intervention (National Research Council, 2001), and pharmacotherapy (Scahill & Martin, 2005). The focus of intervention may be on the core symptoms of ASD and overall development. Alternatively, the intervention may focus on reducing specific target symptoms, such as stereotypic behaviors, hyperactivity, aggression, self-injury, or specific skill development, such as daily living skills, communication, or joint attention.

4.4.1   Applied Behavior Analysis (ABA) Interventions

The applied behavior analysis literature is replete with studies demonstrating the effectiveness of these procedures for individuals with ASDs (Matson, Benavidez, Compton, Paclawskyj, & Baglio, 1996; Schreibman, 2000). This model, based on operant learning theory, presumes that antecedent stimuli and consequences influence both the acquisition and maintenance of behaviors. Investigations into this approach have demonstrated attenuation of problematic behaviors (e.g., aggression, self-injury, tantrums, noncompliance, ritualistic behaviors, etc.) as well as the acquisition of skills (Lovaas, 1987; Mauric, Luce, & Green, 1996; Schreibman, 1997).

4.4.1.1 Managing Challenging Behaviors

Subsequent to conducting a functional behavioral assessment as described in the assessment section of this chapter, functionally derived behavioral procedures may be developed and implemented. Recent years have seen a shift in the ABA field toward prevention and antecedent management strategies (Luiselli & Cameron, 1998) and away from reliance on consequence-based strategies. These approaches include use of visual strategies, modifications in daily schedule, and rearranging the physical setting (Duker & Rasing, 1989; Mesibov, Browder, & Kirklan, 2002). Visual schedules have been used to improve on-task behavior as well as independence in following the classroom schedule (Bryan & Gast, 2000). Environmental adaptations include modification in lighting and sound and physical arrangement of the space.

Another antecedent strategy with considerable empirical support is functional communication training. The premise is that the challenging behavior serves a maladaptive, but effective form of communication. If children with ASD and communication deficits can be taught a more appropriate communication behavior, a decrease in the challenging behavior is expected

(Hanley, Iwata, & Thompson, 2001; Johnson, 2002). The alternative, communication behavior may be the use of a manual sign, use of a picture symbol, or the use of an augmentative communication device.

Ducharmé and Drain (2004) recently demonstrated an antecedent approach to increase compliance. In this errorless compliance training paradigm, high-probability requests are issued, while only very gradually introducing less preferred requests.

Antecedent management approaches are the most effective when implemented in concert with traditional behavioral strategies, such as the systematic reinforcement of alternative behaviors and extinction. A number of seminal studies has demonstrated efficacy of both positive and negative reinforcement in altering challenging behaviors in children with ASD (Carr, Newsom, & Binkoff, 1976; Wolf, Risley, & Meese, 1964). Investigations have highlighted the importance of carefully selecting reinforcers to be used for children with ASDs (Charlop, Kurtz, & Casey, 1990; Mason, McGee, Farmer-Dougan, & Risely, 1989). Charlop and colleagues have demonstrated the effectiveness of using the atypical behaviors the children chose to engage in on their own (obsessions, stereotypical behaviors such as spinning) as reinforcers in children with autism (Charlop-Christy & Haymes, 1996, 1998).

4.4.1.2 Comprehensive Behavioral/Educational Programs

ABA procedures are not solely the mainstay for the amelioration of challenging behaviors. The field also has a long history of contributing to instructional procedures for children with ASD and other developmental disabilities (Dunlap, Kern, & Worcester, 2001; Heflin & Alberto, 2001). These procedures include the systematic task analysis of skills to be taught, direct instruction and discrete trial instruction, and other behavioral techniques, such as prompting, shaping, chaining, and fading.

Comprehensive programs target not only specific problem behaviors (e.g., aggression, self-injury, tantrums, noncompliance, ritualistic behaviors, etc.) but also skill acquisition across broad domains such as communication and social skills over a relatively long period (e.g., 2 years) (Schreibman & Ingersoll, 2005). Such intervention packages include techniques such as incidental teaching (Fenske, Krantz, & McClannahan, 2001; McGee Morrier, & Daly, 1999), the Picture Exchange Communication System (Frost & Bondy, 1994), discrete trial training (Eiskeseth, Smith, Jahr, & Eldevik, 2007; Lovaas, 1987), and pivotal response training (Schreib-man & Koegel, 2005). Although the conceptual framework and interventions differ across such programs, there are many common features. Specifically, all programs emphasize the importance of early intervention, use of specially trained staff, a low staff to student ratio, a focus on the child's social development and communication skills, a high value on individualized treatment, and active involvement of the family (National Research Council, 2001). Differences include the degree of structure and level of intensity of the various program models. Several comprehensive educational programs have published outcome data showing developmental gains in language functioning or IQ (Kasari, 2002). These studies suggest that factors, such as level of cognitive functioning, presence of expressive language skills by age 5, and hours of service may predict positive treatment outcomes (National Research Council). Available research suggests that early intensive intervention is effective in maximizing long-term outcome for children with autism (Handleman & Harris, 2001).

4.4.1.3 Behavioral Parent Training

In the behavior analytic literature, persons administering specific behavioral interventions may be highly trained behavior analysts, teachers, trained one-on-one therapists, or parents. Research on training parents indicates that parents can learn ABA techniques for reducing problem behaviors and increasing compliance, as well as for increasing communication and other adaptive skills (Charlop & Trasowech, 1991; Drew et al., 2002; Ducharmé & Drain, 2004; Jocelyn, Casiro, Beattie, Bow, & Kneisz, 1998; Kaiser, Hancockm, & Niefeld, 2000; Smith, Groen, & Wynn, 2000; Tonge et al., 2006). In most studies, duration of parent training has been relatively small, totaling less than 20 hours. Most of the comprehensive treatment programs for children with ASD include a parenting training component and include a range of techniques that have been validated in separate, single-subject design studies (National Research Council, 2001).

Parent training programs share many common elements. For example, most seek to identify antecedents and consequences occurring in the environment that may be contributing to a behavior of interest. Parents are also typically taught to record the child's response in everyday settings and then to modify the child's behavior through environmental manipulation (prevention and antecedent management). Instruction in communication, play, or social skills may also be included. Appropriate use of positive reinforcement, extinction, and other reduction techniques are also commonly covered.

4.4.2 Psychopharmacology

Psychopharmacology treatment in ASD has been a long standing practice. Pharmacologic treatment is most often an adjunct to educational, behavioral, and other treatment approaches. In fact, 46% of respondents to a survey reported medication use for the family member with autism and prescription of medication use is associated with the increased age and increased severity level (Aman, Lam, & Collier-Crespin, 2003; Langworthy-Lam, Aman, & Van Bourgondien, 2002). Medications do not primarily treat the core behavioral symptoms of autism but rather target particular behavioral or psychiatric symptoms. These include disruptive and aggressive behaviors, attention and hyperactivity symptoms, and affective symptoms such as anxiety and depression. Despite wide use of psychotropic medications, efficacy studies of medications specifically in individuals with ASD have been limited (Handen & Lubetsky, 2005). Classes of medications prescribed for individuals with ASD include primarily stimulants, antipsychotics, antidepressants, and mood stabilizers. In the few double blind, placebo-controlled studies of methylphenidate, there were decreases in overactivity and inattention symptoms, but side effects were also observed (Handen, Johnson, & Lubetsky, 2000). Side effects include appetite loss, irritability, social withdrawal, and development of motor tics. Antipsychotic medications have an extensive history in the treatment of a range of behavioral symptoms to include hyperactivity, irritability, social withdrawal, and stereotypical behaviors. The "typical," older antipsychotic medication that has been most studied in ASD was haloperidol with some suggestion of improvement (Campbell et al., 1997). More recent years have seen a surge of the use of "atypical" antipsychotics in the treatment of ASD. These include clozapine and risperidone. The side effect profile of the atypical antipsychotics is an advantage over older, typical antipsychotics. Risperidone has been most widely studied and in fact was the first drug approved by the FDA for the treatment of disruption and irritability in ASD. Antidepressants

have had broad use in individuals with ASD to treat depressive and anxiety symptoms, obsessive and compulsive behaviors, ritualistic and stereotypical behaviors, and self-injurious behaviors. Clomipramine, a tricyclic antidepressant, was earlier studied with equivocal findings. This group of antidepressants has been associated with decreased seizure threshold and risk of toxicity with overdose. In more recent years, fluoxetine, a selective serotonin reuptake inhibitor (SSRIs), has been the most studied in ASD. Other SSRIs used in ASD but less studied include fluvoxamine, sertaline, and venlafaxine. While the SSRIs have a more benign side effects profile, the FDA now requires all antidepressants to carry a warning on the label about increased suicidality in children and adolescents (FDA Public Health Advisory, October, 2004). The last group of medications used with some frequency in ASD includes mood stabilizers. Anticonvulsants with mood stabilizing properties have been used in ASD. However, the empirical base is limited.

4.5 Mechanisms of Change Underlying the Intervention

An understanding of change mechanisms underlying the treatment approaches is important in the conceptualization of a case, as well as in the refinement or modifications of treatment over time. Ongoing treatment evaluation allows for the appraisal of treatment effectiveness and the need to make necessary changes.

4.5.1 Mechanism of Change Underlying Behavioral and Educational Interventions

Procedures of behavioral and educational interventions may be narrowly or more broadly based on those borne out of applied behavior analysis. While the early focus of operating conditioning was on the manipulation of consequences to change the probability of a behavior in the future, this two-term contingency has been expanded over the years. Application of operant conditioning to change human behavior, ABA, now includes consideration of antecedents. These antecedents include the establishment of discriminative stimuli to occasion a behavior (by a history of pairing with reinforcement) and by establishing operations to motivate the behavior. This is along with attention to consequences. Behavior analysts now operate within the assumption of a four-term contingency (discriminative stimuli, motivation operation, behavioral response, and consequence). The systematic application of these procedures has shown to result in behavioral change and also in the learning of new skills. Within an educational framework, behavioral interventions have varied from highly structured (discrete trial therapy) to more naturalistic settings (incidental teaching). However, the assumed mechanisms of change are the same.

4.5.2 Mechanisms of Change Underlying Psychopharmacological Treatments

As with other treatments for ASD, pharmacological treatment is not curative but rather alleviates behavioral symptoms or clusters of symptoms. Psychopharmacological agents target

different neurotransmitter systems in the brain, which are assumed to be the primary mechanism of change for this treatment modality. For example, methylphenidate is believed to increase norepindephrine, which results in improved attention. Fluoxetine, a serotonin reuptake inhibitor, thus increases the availability of serotonin, which is implicated in the regulation of mood. While these effects are inferred from use in other populations, the mechanism in children with ASD may in fact be side effects of the medication. That is, the behavioral change may be secondary to the sedating effects of the medication. For example, risperidone affects both the dopamine and serotonin systems, but can be quite sedating, particularly initially.

4.6 Basic Competencies

ASD are now considered a group of common neurodevelopmental disorders. Given the increase in prevalence, there is a pressing need for more psychologists to be prepared in all aspects of services to screen, diagnosis and assess and treat these children and adolescents. Psychologists who serve children of any age should have familiarity with the symptoms of ASD along with an understanding of typical child development.

4.6.1 Screening and Referral

Assumed at this level is that the clinician will be familiar with the criteria for ASD diagnosis. Psychologists should be competent in their knowledge of available screening instruments. If a screening instrument along with initial information gathered is suggestive of ASD, a clinician without the competencies to complete a diagnostic evaluation (as described below) for a child suspected of ASD should make the appropriate referral to a clinician with this expertise.

4.6.2 Diagnostic Evaluation

Clinical psychologists play a significant role in the evaluation of children to determine their diagnostic status. Clinical psychologists who accept the role of evaluating children where ASD is possible based on referral concerns should be skilled at ascertaining current developmental and behavioral concerns. Additionally, competency at gathering a very detailed account of the child's developmental course across developmental domain with particular attention to communication and social development is required. Case history should further include detailed account about medical issues with probes about possible co-occurring medication problems (e.g., seizures, sleep disturbance). Knowledge about not only the diagnostic criteria for ASD is required, but knowledge of the presentation of other developmental disorders is also necessary for differential diagnosis.

Likewise, astute direct observation of the child during unstructured and structured observation is essential. This should include observations of spontaneous communication behaviors, response to others communication along with social responsiveness, choice of play activities, and presence of atypical behaviors (e.g., repetitive play, repetitive movements).

4.6.3   Cognitive/Developmental and Adaptive Behavior Assessment

Assessing developmental/cognitive functioning in children with ASD is a critical aspect in treatment planning. Psychologists are typically trained in the administration of such instruments. Psychologists should be competent not only in the administration of such standardized measures, but should be particularly skilled in the administration to these measures to children with ASD. This requires a high degree of familiarity with the assessment tools as maintaining the attention and motivation of a child with ASD can be particularly effortful. The clinician must be knowledgeable about which tool is the best fit based on the age of the child, what is known about functioning, and even what the child finds interesting. For example, for a child who is reported to like to sort objects, starting with such test stimuli may be advisable to promote interest and cooperation. Skill at administering and interpreting adaptive behavior measures is of further importance.

Some of the intelligent and developmental tests recommended for children with ASD include the Weschler scales (Wescher, 2003), the Leiter International Performance Scale – Revised (Roid & Miller, 1997), the Differential Abilities Scales (Eliot, 2002), and the Mullen Scales of Early Learning (Mullen, 1995). The newest version of the Stanford-Binet Intelligences Scales: 5th Edition (Roid, 2003) has also been widely used. The Vineland Adaptive Behavior Scales (Sparrow, Balla, & Ciccetti, 2005) has been the most widely used adaptive behavior measure in ASD. Skill at administering a few of these measures should be mastered at this stage of competency. The Adaptive Behavior Assessment System (Harrison & Oakland, 2003) is another adaptive behavior measure which is growing in use in ASD.

4.6.4   Behavioral Assessment/Functional Behavioral Assessment

Informant behavior rating measures should be included to better quantify behavioral/ emotional issues. The Child Behavior Checklist (Achenbach & 2000; Achenbach & Rescorla, 2001) has been used for this purpose as has the Aberrant Behavior Checklist (Aman, 1994). The Aberrant Behavior Checklist has also been used as an outcome measures in the treatment studies in ASD. Psychologists serving children with ASD may also be called upon to complete a functional behavioral assessment as part of a comprehensive evaluation, in planning for a home-based treatment program, or for educational program planning. The psychologist should be skilled in determining environmental variables within an operant learning framework that may be implicated in the maintenance of disruptive behaviors, but also in determining variables contributing to lack of skill development.

4.6.5   Assessment of Parenting Stress and Family Functioning

Within the context of a comprehensive assessment, attention to the family functioning is important to meet the needs of the family as well as the child with ASD. The Parenting Stress Index (Abidin, 1995) is often used for an initial evaluation but also repeated as the child is re-evaluated to monitor progress. This is a 36-item parent-completed questionnaire (short form) for families of children 12 years of age and younger, which has been empirically validated. The General Health Questionnaire (Goldberg & Williams, 1988) has also been used in ASD

(Tonge et al., 2006). This brief questionnaire assesses parental mental health. The Family Crisis Oriented Personal Evaluation Scales (McCubbin, Thomas, & McCubbin, 1996) is a 30-item scale that assesses how families cope with stress. This measure has been used in other studies that have examined the functioning of families with children with autism.

4.6.6 Parent Education and Support

Given the chronic nature of ASD, the impact is likely to be a burden for the family. The social and communication deficits in autism may adversely affect the parent–child relationship. The presence of behavior problems is likely to impose additional strain. Indeed, mothers of children with ASD report higher levels of stress and depressive symptoms than mothers of children with intellectual disabilities uncomplicated by ASD or mothers of typically developing children (Olsson & Hwang, 2001; Yirmiya & Shaked, 2005). The challenge of parenting a child with ASD may undermine parental competence. Psychoeducational efforts may help parents understand the nature of autism, help align their expectations with reality, and help fix their vision of making certain that their child can achieve the highest level of functioning possible. This type of educational effort may be especially useful when a young child is first diagnosed with ASD.

4.6.7 Ethical Practices

Psychologists should be competent with respect to implementation of ethical practices related to confidentiality, informed concent, access and sharing of information, and reporting laws and procedures. These all apply in providing clinical care for children with ASD. Psychologists must be particularly sensitive to the sharing of information. It is often the situation where a child with ASD is provided services across a number of systems. However, parents may not wish to share the ASD diagnosis at all. Psychologists should also be sensitive to any dual roles that could arise. For example, a psychologist may provide diagnostic evaluations in their practice but also provide consultation in a school setting. Furthermore, with the range of intellectual functioning levels in individuals with ASD, obtaining informed consent may require different special steps for those adolescents who are no longer considered a minor. Fisher (2003) offers useful guidelines for determining an individual's capability to provide informed consent.

4.6.8 Culturally Sensitive Practices

There are data to suggest disparity in the early diagnosis of ASD. In a recent report, African Americans were found to be over two times less likely than Caucasians to be diagnosed with ASD on their first visit to a specialist (Mandell, Ittenback, Levy, & Pinto-Martin, 2007). African–Americans were instead more likely to be diagnosed with a behavioral diagnosis, such as Conduct Disorder or ADHD. Such findings underscore the immediate need for the implementation of more culturally sensitive practices in the diagnostic process. This applies to all aspects of care from careful choices in diagnostic and assessment measures, recognizing the cultural differences, which may be operating during this process, and to recognize possible

barriers in the treatment delivery. Mandell and colleagues suggest the needs for a greater aware-ness of possible ethnic differences in: (1) how behavioral and developmental differences are communicated, (2) how these differences are perceived, and (3) how the clinicians' beliefs about diagnoses in ethnic groups influence the rendering of a diagnosis (Mandell et al., 2007).

4.7 Expert Competencies

The extensive professional proficiencies required in the clinical care of ASD mirrors the exten-sive, complex needs of individuals with ASD. These needs vary across developmental levels and chronological ages as well as whether there are co-morbid conditions present. As already sug-gested, professional psychologists may display expert competencies in some, but not all of the clinical roles. For example, it is not uncommon for psychologists to gain expertise in the diag-nostic evaluation of children with ASD but only have basic competencies in some of the treat-ment practices. These psychologists may refer a child for treatment once they have rendered a diagnosis. Conversely, psychologists may develop expertise in the delivery of treatments borne out of ABA for preschoolers, but maintain basic competencies when it comes to the evaluation and treatment of older children or adolescents with ASD.

4.7.1 Expertise in Diagnostic Measures

Expert competency includes the mastery of use of the "gold standard" diagnostic mea-sures. Currently, widely used in the ASD field is the Autism Diagnostic Interview – Revised (ADI-R; Rutter, Le Couteur, & Lord, 2003). By using a standardized interview format, informa-tion is gathered in a more systematic manner. The ADI-R probes several areas to include early development, communication skills, social behaviors, play behaviors, and restricted interests and behaviors. Diagnostic assignment is made following an algorithm keyed into DSM-IV criteria for autism. The ADI-R also provides a dimensional measure of severity of autistic symptomatology. A standardized observational approach is the Autism Diagnostic Observation Schedule (ADOS; Lord, Rutter, DiLavore, & Risi, 2002). This direct observation measure may be administered in a clinic setting. It involves placing the child in naturalistic social situations demanding specific social and communication responses. Although the protocol follows stan-dard administration, the situations themselves are unstructured. Thus, the ADOS provides a sample of the child's behavior in a naturalistic setting. Behaviors are coded in the areas of social communication, social relatedness, play and imagination, and repetitive behaviors. The ADOS also provides a DSM-IV based algorithm for the diagnosis of autism, non-autistic ASD, and non-ASD.

In addition to a diagnostic interview and direct observation, there are ASD-specific infor-mant rating measures. The Social Communication Questionnaire (Berument, Rutter, Lord, Pickles, & Bailey, 1999) is the parallel parent report to the ADI-R. Other instruments include the Screening Tool for Autism in Two-Year-Olds (Stone, Coonrod, & Ousley, 2000), Childhood Autism Rating Scale (Schopler, Reichler, & Renner, 1988), and the Gilliam Autism Rating Scale (Gilliam, 1995).

4.7.2   Expertise in Assessing All Developmental/Cognitive Levels

Proficiency in administration of the range of developmental and cognitive measures to the range of developmental levels present in ASD is required at this level of competency. Hence, an expert in this area must be capable of administering a developmental measure to a 2 years or a 10 year old as well as administer cognitive assessments to 5–18 year olds with superior cognitive functioning. Expertise in a range of measures to best meet the assessment needs of the individual being evaluated is needed. Furthermore, training and adeptness in administering neuropsychological measures when assessing older, higher functioning children with ASD is critical, as often subtle differences in executive functioning and higher order information processing are often present.

4.7.3   Expertise in Assessing Communication and Language Skills

In view of psychologists' training in the administration of standardized tests, training in and the administration of communication and language measures is often important for those with expertise in ASD. This is particularly the case when a speech/language pathologist is not part of the assessment team. Standardized instruments appropriate for young children include the Preschool Language Scale (Zimmerman, Steiner, & Pond, 1992) and the Reynell Developmental Language Scale (Reynell & Huntley, 1987). There are also parent report measures to include the Communicative Development Inventory (Fenson et al., 1993), the Language Development Survey (Rescorla, 1989) and the Receptive-Expressive Emergent Language Scale (Bzoch & League, 1991). For children with more advanced language skills, instruments which measure more complex aspects of language and communication including pragmatics include the Comprehensive Assessment of Spoken Language (Carrow-Woolfolk, 1999) and the Test of Language Competence (Wiig & Secord, 1989).

4.7.4   Expertise in Conducting a Behavioral Functional Assessment

A thorough behavioral functional assessment often includes interviewing those caring for the child, the direct observation of a child in naturalistic contexts, and conducting functional analogue observations. At this later level of analysis, environmental variables are controlled and manipulated to determine how they may be maintaining a behavior or a group of behaviors and if altering them affects the behavior. Functional analysis procedures were first described in a seminal article by Iwata and colleagues (Iwata, Dorsey, Slifer, Bauman, & Richman, 1982). Since this time, this procedure has received considerable attention in the literature. Common analog observations include the following conditions: (a) Free play or control condition (no demands are placed on the child and preferred toys are available), (b) Attention (where an adult is instructed to attend to the child when engaging in the target behavior), (c) Demand (where the adult makes requests of the child), and (d) Tangible Restriction (where the child is faced with the removal of a highly desirable toy). Knowledge of procedures and skills to conduct a functional analysis along with the interpretation of the data are considered essential for those experts developing and implementing functionally derived behavioral treatment.

4.7.5 Expertise in the Assessment of Sensory Behaviors

Psychologists with expertise in ASD should be informed about the newly developed measures of sensory behaviors and their psychometric qualities. A couple of these include the Sensory Experiences Questionnaire (Baranek, 1999) and the Evaluation of Sensory Processing (Parham & Ecker, 2002), which are both informant report. Direct observation tools have also been developed but are less widely used. One of these include the Tactile Defensiveness and Discrimination Test – Revised (Baranek, 1998).

4.7.6 Expertise in Applied Behavior Analysis

In line with skill in conducting functional analysis, psychologists who are involved in the treatment, whether that is direct treatment delivery or oversight of treatment delivered by others, should have expertise in ABA procedures and interventions. While many if not most psychologists have some general training in the clinical application of operant and respondent conditioning, more in depth knowledge and training in ABA paradigms as applied in ASD is critical when involved in the treatment of individuals with ASD. This is based on the premise that treatments based on ABA have the strongest empirical base and have been used to improve a range of core symptoms as well as to attenuate challenging, interfering behaviors. Paradigms include discrete trial therapy and direct instruction, pivotal response training, incidental teaching, and communication training based on B.F. Skinner's analysis of verbal behavior.

4.7.7 Expertise in Parent Education/Training Model

Parent training or what might be referred to as parent mediated treatment is a very common form of treatment delivery in ASD. Parent training as a service delivery model is of interest not only given the central role that parents have in promoting the development of their children with ASD, but also in light of the lack of trained professionals to work with children with ASD. Providing parent training requires not only expertise in ABA but also expertise in rapport building with parents. While in direct treatment delivery, the psychologist is implementing the behavioral procedures, with parent training, the psychologist must not only teach the parent but motivate them to use the procedure at a later time. Parent training requires all the therapeutic skills needed for other, more traditional therapies.

4.7.8 Consultation and Staff Training

Psychologists with expertise in ASD are often sought out to provide consultation and staff training in a variety of settings. These might include consultation in school settings, mental health programs such as a partial hospital program, after care programs, and childcare programs. Consultation might be centered on a particular child with ASD. Staff training may be aimed at increasing knowledge of staff about ASD and strategies they can use in their respective settings. In light of the prevalence of ASD, more and more care providers across settings will need skills in working with children with ASD.

4.7.9 Expertise in Culture Sensitive Practices

Sensitivity to other cultures is called upon by those providing ASD treatment in particular. As treatment is often delivered within the home setting, clinical psychologists should be well-informed to a large extent of the cultural practices of families they are serving. This could be the supervisor of home-based therapy or a consultant role. Psychologists should also be sensitive to any cultural clashes with prescribed behavioral approaches. For example, some families may prefer the less structured approach of incidental teaching than the more structured approach of discrete trial training. Similarly, parents may find some behavioral procedures as more acceptable (positive reinforcement) than others (timeout) (Jones, Eyberg, Adams, & Boggs, 1998). Psychologists should clearly gather this information in ongoing treatment planning.

4.8 Transition from Basic Competence to Expert

With the movement in professional psychology toward a competency-based model, identifying those specific to the rapidly growing clinical needs of ASD is imperative. As Kaslow and colleagues have suggested, this transition is an ongoing process (Kaslow et al., 2004; Kaslow, Dunn, & Smith, 2008). This is particularly the case in ASD where the field is relatively young and substantial changes in our knowledge base are occurring at a brisk rate. The transition from basic to expert competencies in ASD can be conceptualized on a few levels. At one level, this may involve expertise in increasing the areas of service roles. Another level is more expertise in one particular area (e.g., treatments). At another, the transition may be increasing expertise with additional developmental stages. Acquiring higher level competencies may be accomplished by a range of professional activities. These include supplemental coursework, formal and informal mentoring and supervision, time-limited continuing education activities, and review of current professional literature.

4.8.1 Supplemental ASD Coursework

Clinical psychologists may wish to identify specific coursework on ASD to augment their knowledge base. Relevant courses may be in other closely related academic departments such as special education or early intervention programs when not available in the psychology training program. Coursework specific to the diagnostic assessment are often available and invaluable to gain more knowledge. A supervised practicum component is often an important part of such coursework.

For those psychologists interested in gaining expertise in treatment, coursework and practicum experiences in applied behavior analysis is highly relevant. There is a professional certificate program in behavior analysis offered through the Behavior Analysis Certification Board. This certification requires a certain level of training and successful examination completion to demonstrate competency as a Behavior Analyst. At the time of this writing, five graduate courses are required along with fairly intensive supervised practicum experiences to be eligible to sit for the certification exam.

4.8.2   Mentoring and Supervision

Development of expert levels of competency may be sought through formal mentoring and direct supervision of an already recognized expert. Such arrangements may be formal, such as a specialized internship or postdoctoral fellowship with a focus on ASD or less formal mentoring by an expert in the field. These mentoring opportunities afford repeated opportunities to both observe the expert and to be observed. For example, becoming competent in the use of ASD specific diagnostic measures requires many opportunities to observe their administration along with frequent opportunities to administer. It is challenging to develop expert competencies in ASD without ample exposure to this unique population. Likewise, becoming an expert in intervention requires many supervised intervention cases of sufficient heterogeneity.

4.8.3   Continuing Education Activities

Psychologists may move toward the acquisition of expert competencies by learning via ASD continuing education programs. For example, intensive training in diagnostic measures is offered by the developers (www.umaccweb.com/education). This training program offers not only didactic experiences but an occasion to be observed by the experts. Likewise, there are week-long autism conferences aimed at training a wide range of professionals to increase competency given the need for more providers in this area.

4.8.4   Review of the Literature

While ASD was much understudied until recent years, the last 2 decades have seen a proliferation of scientific publications addressing all levels of investigation. Most relevant to clinicians are those related to diagnostic and assessment practices as well as best practices with respect to treatment. There are now dedicated journals just to ASD. These include the *Journal of Autism and Developmental Disabilities*, *Autism*, and *Research in Autism Spectrum Disorders*. A two volume second edition comprehensive handbook on ASD was published in 2005 (Volmar, Paul, Klin, & Cohen, 2005). The two volumes compared with the one volume of the former edition attests to the rapidly advancing research and clinical interest in the area. For those psychologists looking to provide or supervise more direct treatment or to provide parent training, there are numerous ABA focused journals to include, the *Journal of Applied Behavior Analysis*, *Behavior Modification*, and *Behavioral Interventions* to name a few.

4.9   Summary

Clinical psychologists may play many important roles in the assessment and treatment of individuals with ASD. The purpose of this chapter is to provide an overview of this diagnostic category as well as an overview of the best clinical practices. In keeping with the competency-based movement, basic and expert competencies are discussed in several areas of clinical practice. These include assessment skills in screening, diagnostic evaluation, comprehensive assessment of developmental domains (e.g. cognitive, communication, adaptive skills), behavioral

assessment, assessment of atypical sensory behaviors, and finally assessment of family functioning and stress. Competency in treatment requires another set of skills with an in depth knowledge of ABA treatments. Psychologists may further play pivotal roles in providing consultation and staff training to other providers serving children with ASD.

In light of the heterogeneity and developmental nature of ASD, clinical psychologists may choose to develop basic or expert competencies in a few areas based on their clinical practices. All clinical psychologists should be knowledgeable about the diagnostic characteristics of this group of disorders given the increased prevalence. Psychologists who choose to develop a practice to serve children with ASD should take appropriate measures to acquire the necessary skills to do so. As the field of ASD is advancing rapidly, psychologists must take efforts to remain abreast of new findings related to their clinical practices.

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5 Learning Disabilities

Johnny L. Matson · Jill C. Fodstad

Abstract: Learning disability (LD) is considered one of the most prevalent conditions in the educational system today. While the definition of what constitutes an LD varies, researchers, policymakers, educators, and clinicians agree that, generally, a child who has an LD has a marked discrepancy in performance in one or more major areas of learning while performing at or above peers in other domains. This deficit in learning has been shown to not only hinder the child with LD academically but is also linked to poorer long-term outcomes and other serious problems of adjustment. Therefore, early diagnosis and intervention of a child with LD is a high priority. Furthermore, it is imperative that the clinician is knowledgeable about what treatments are supported by the literature since LD is a fad magnet for ineffective and unsubstantiated treatments. Even in the midst of the nebulous and oft contested etiological theories, definitions, assessment and diagnostic techniques, and intervention practices, the clinician is given the task of being familiar with the many facets of LD while being competent enough to accurately assess, diagnose, and intervene upon this often nebulous childhood condition. In this chapter, a basic guideline regarding assessing, diagnosing, and treating LD is outlined. A thorough discussion regarding the current controversy pertaining to LDs is included. Additionally, the basic skills and various empirically supported interventions specific to LD are reviewed. The aim of this chapter, then, is to give the clinician aiming to work with individuals with LD an introduction into the competencies and skills that are essential. Taking what is delineated in this chapter coupled with a commitment to life-long learning and professional development will engender accurate clinical judgment and a high degree of professionalism in a field that continues to change.

5.1 Overview

Since its designation as a disability via federal legislation in 1968, learning disability (LD) has steadily become one of the most prevalent conditions represented in special education classrooms nationally (Donovan & Cross, 2002; President's Commission on Excellence in Special Education, 2002); however, it has remained one of the most nebulous and debated of the disabling conditions that affects students (Bradley, Danielson, & Hallahan, 2002; Dombrowski, Ambrose, & Clinton, 2007; Fuchs & Fuchs, 1998). The current US definition suggests that LDs are not a unitary entity, but are, in essence, a broad and heterogeneous group of conditions that result in impediments in learning. In particular, the literature converges into an organization of general academic aptitudes that are impacted by the conditions, which incur an LD including listening comprehension, oral expression, basic reading skills, reading comprehension, written expression, and mathematics (calculation and reasoning). It is in these academic skill sets that significant problems are evident and linked to underlying difficulties involving language use and abstract concepts (Swanson & Hoskyn, 1998).

In the UK, children classified as having an LD parallels that of intellectual disability (Berney, 2006; O'Brien, 2004). Unlike the use of the term in the UK, children in the US must not evince

pervasive learning deficits to be classified as having an LD. Rather, the US definition consists of marked discrepancies in performance in one or more major domains of learning, while performing at or above typically developing peers in other domains (Mitchem, Richards, Obiakor, Utley, & Rotatori, 2003). For example, the child may perform at grade level in math but have substantial deficits in reading. Thus, to a large extent, this definition has been on the basis of academic performance and how closely the child approaches average academic growth patterns. The underlying factors that result in LD can be generally subsumed under four domains: (1) IQ – achievement discrepancies, (2) presumption of central nervous system dysfunction, (3) psychological processing disorders, and (4) learning problems unrelated to environmental factors, intellectual disability, or emotional disorders (Hallahan & Kauffman, 1997). In this chapter, the US definition will be used when describing LD.

Despite this broad and agreed upon definition of LD, in practice, the differences in the specific characteristics of the condition and its definition vary markedly. In addition, the number of LD definitions has steadily increased since its inception in the early 1960s. Hammill (1990), for example, identifies 11 different definitions of LD. We believe that a major reason for this confusion is the high level of politization of the diagnosis. No disorder is defined in vacuum; however, typically researchers in the field, along with input from the leaders in the general culture, define the disorder through major mental health diagnostic manuals such as the DSM-IV-TR (American Psychiatric Association, 2000) or ICD-10 (World Health Organization, 1992). Definitions of ADHD and autism would exemplify this approach. In the case of LD, state and federal governments often develop much different definitions typically with an eye to pragmatic service provision needs in marked contrast to definitions developed by the leading researchers and clinicians in the field. For example, the recent reauthorization of the Individuals with Disabilities Education Improvement Act (IDEA) has resulted in yet another set of revised parameters. This federal mandate allows the use of the discrepancy model, as described earlier, for making a diagnosis based on "a comprehensive evaluation." In addition, this same mandate also allows the use of a process to determine if a student responds to scientific research-based intervention or other alternative research-based procedures to determine LD eligibility. Given that there is no standard protocol to this comprehensive evaluation, states are left to determine what they feel is the best way to assess and identify LDs. Thus, definitions and how LD is assessed are linked in a disjointed fashion the way few other disorders can lay claim.

These problems in varied diagnosis are often compounded by the fact that vague or nonspecific operational definitions are in commonplace. Flanagan, Ortiz, Alfonso, and Dynda (2006) note this problem and are among several researchers to propose solutions. On the basis of the available data, our view is that the most parsimonious definition for LD would take into account the following factors. First, the available research on etiology and nosology should drive the definition. Second, some agreement on methods for assessing LD would be very helpful. At present, there are two such camps; the cognitive abilities/processing and a codemic outcomes group, which relies on standardized testing, particularly IQ and achievement tests. The second group uses a more environmentally applied behavior analysis model, which emphasizes how well the child responds to intervention. Presumably, the child with LD would not respond as well as children who, for example, had a poor teacher and did not develop relevant phonetic building blocks. Alternatively, the type of learning strategies that were effective across these two groups might differ to some degree.

Therefore, differences in definition and methodology to establish definitions differ markedly in the LD field. Of the childhood disorders, it has perhaps the maximum disagreement on

definition. This state of affairs has existed since the inception of the diagnosis, and there is no sign that this controversy will abate anytime in the near future. In fact, researchers in the LD field have described these positions as "entrenched" (Dombrowski et al., 2007). Basically then, an LD diagnosis, in its most general form, refers to academic problems that are not primarily motivational or to the child who does not have an intellectual disability (as established with standard IQ and adaptive behavior measures). Furthermore, while some debate exists as to whether the child has marked strengths in some academic areas and major weaknesses in other areas, this is a common feature of many definitions. For this chapter then, we will use this broad definition with respect to our discussion on LD.

Whatever the definition, LD is a high incidence condition that results in a large percentage of those children who are referred to special education services. For example, the U.S. Department of Education (2000) notes that 70% of the children who meet eligibility criteria for special education have LD, mild intellectual disability, or emotional and behavioral disorders. Furthermore, experts in the field agreed that LD has the largest proportion of students receiving special education services of any childhood disability (Kirk, Gallagher, Anastasiow, & Coleman, 2006). The number of students with disabilities being served by public schools during the 1999–2000 school year exceeded 5½ million, and over ½ of these had an LD diagnosis. In addition, the percentage of children with an LD diagnosis has grown over 300% in the 25 years leading up to this figure (Richards, Dooley, Burkhardt, Obiakor, & Rotatori, 2004). These high rates are underscored by the fact that special education placement results in a poorer long-term prognosis than is the case for persons who do not meet this criteria (U.S. Department of Education, 1997). To a large degree, this would seem intuitive. Those children in special education have more learning and other school-related problems, thus higher school drop out rates. However, a commonly held belief by many professionals is that contained specialized programs, in fact, exacerbate existing school-related problems at a rate not seen in classrooms for typically developing children. As we have discussed, definition is important. Furthermore, whatever definition is implemented, without taking state-to-state variation into account, rates of LD persist and, as such, continue to be one of the most important childhood disabilities.

5.2   Recognition and Assessment

The lack of an acceptable LD definition has resulted in significant problems in agreement on classification and diagnostic efforts. The many beliefs that exist among researchers, educators, advocates, and clinicians permeate the literature and seem to add to the general confusion. In addition, IDEA (2004) has mandated that more than one method needs to be used to establish the eligibility for LD services; however, there is no stipulation as to the "standard protocol" clinicians should follow to arrive at an LD diagnosis. Given this ambiguity, being able to administer and provide a comprehensive assessment of students "at risk" for LD is critical to the correct identification of students for accommodation eligibility, curriculum modifications, evaluating academic intervention, and determining the appropriate educational services.

An LD assessment should be an objective process of collecting information on a broad range of topics. It is suggested, then, that information is obtained on the following areas: (1) academic, intellectual, perceptual, motor, and behavioral functioning; (2) health history; (3) developmental history, developmental delays, and prenatal and perinatal complications;

(4) personality, temperament, effect, motivation, and interpersonal relations; (5) family history of learning problems; and (6) cultural factors, peer group factors, pedagogical factors, and school factors.

The information collected during this comprehensive assessment can be used for three related, but somewhat different, purposes: (1) screening and referral; (2) diagnosis and placement; (3) instructional planning and evaluation of student progress.

Screening and Referral. The screening phase involves identifying students "at risk" for having or developing an LD. This phase of the assessment process is carried out in its entirety in the school system based on the classroom behavior of the child combined with academic performance grades and scores on curriculum-based measurements. Typically, the child's primary teacher would provide global judgments of the child's performance, as they have the most direct contact and, therefore, would be the most reliable authority (Bryan & Wheeler, 1972). The outcome of this screening process would determine the degree to which the student is performing academically when compared with his or her peers and their expected scholastic growth given their current level of skills. Those found to have deficient skills relative to peers should have further testing to determine the student's strengths and weaknesses, and overall academic progress across the current curriculum being taught. From the information gathered, educators should be able to pinpoint the student's deficit academic readiness skills, the steps of a learning task the student is able to complete, the individual learning style of the student, and the specific academic domain(s) (e.g., reading) that are the most problematic.

Diagnosis and Placement. After screening and referral, the next step in the assessment sequence is diagnosis and placement. As noted, the main purpose of a comprehensive assessment is to gather information and data about an individual to determine the individual's eligibility for special education services, to describe the specific nature of the student's LD, and to develop a relevant program plan for the individual once eligibility has been established. For most clinicians, a reliance on standardized testing is the basis by which a diagnosis of LD is established. This point is particularly important given the oft vague LD definition and the manner in which, per history, an LD assessment has been made. The best approach to determining LD eligibility is an IQ-achievement discrepancy (Bailey, 2003). This model stipulates that for children to be classified as having LDs, a severe discrepancy must be found between ability, usually defined by an intelligence test score, and achievement, usually defined by a reading, mathematics, or written expression test score or by an overall achievement test score. Employing a regression-to-the mean equation, the discrepancy arises when the child performs at a low level in a specific academic skill area than a higher level predicted by the model, given the individual's general intelligence (e.g., a child with average IQ who is reading far below grade level). According to the DSM-IV-TR, a discrepancy of 2 standard deviations between the predicted and observed scores generally qualifies as severe, but in specific cases (e.g., comorbid psychopathology, general medical condition, or ethnic or cultural barriers) 1–1.5 standard deviations may be used (American Psychiatric Association, 2000).

While the IQ-achievement discrepancy model is easy to implement, there are some problems with its use. Perhaps the greatest problem in the application of the discrepancy formula is that many children will not be identified as having an LD in their early school years. Because children's achievement abilities cannot be reliably measured before the age of 9 years, children having 6–8 years may not receive adequate services until later when they have failed a grade or are showing severe deficits in basic academic skills (Sattler & Lowenthal, 2006). If an LD exists that affects language or other cognitive development from the earliest years, a child might

experience much of his or her formative years with a handicap before anything is done about it. Since LD becomes more problematic the longer the remedial action is delayed (Lyon, 1996), waiting until the learning problems are evident may cause intellectual and other academic skills to be compromised. This phenomenon, termed "wait to fail," has been the single biggest criticism of the discrepancy model.

Another model that has been proposed as useful in the diagnosis of LDs is called response to intervention (RTI). In an LD assessment incorporating an RTI approach, children are given standard instruction in a regular classroom and those who are making poor progress are given specialized intensive and systematic instruction at increasing intensity (Sattler & Lowenthal, 2006). Only until it is apparent that the child is unresponsive to any of the interventions is he or she placed in special education and given an LD diagnosis. The main benefit that advocates for this model suggests is that it circumvents the "wait to fail" phenomenon associated with the IQ-achievement discrepancy. Since RTI referral rests largely on student performance on curriculum-based measures, educators are able to refer "at risk" children earlier and, therefore, intensive remedial instruction is able to begin in a timelier manner. RTI, furthermore, boasts that because direct instruction can begin at the early stages of academic development a decrease in children being labeled as LD may result (Donovan & Cross, 2002). But because this method is still in its infancy, more longitudinal outcome data are needed.

The RTI approach to LD diagnosis has been gaining popularity as the push for evidence-based interventions has proliferated and expanded into the educational arena. However, to date, there is not enough substantial research and data to attest to the validity of the RTI model as a complete substitution for other models for LD assessment. Problems with RTI arise when a closer look into the inner workings of the RTI model is taken. For instance, the RTI model inherently focuses on the reading ability of children to identify who is "at risk" and in need of specialized instruction (Kavale, Holdnack, & Mostert, 2005). The instruction provided is largely based on a database of evidence-based treatments with, at best, moderate effects (see National Reading Panel, 2000). Still unchallenged, these reading interventions focus primarily on decoding and phonological processing and are implemented without considering math, writing, or reading comprehension deficits (Kavale et al., 2005). Another problem with this approach is that there is no standard for what interventions are implemented, who is qualified to implement them, what is considered a successful response to instruction, and how long these interventions must be continued until the child is identified as having a learning disability. Lastly, for the child who advances through the RTI assessment and is ultimately found to be eligible for special education, it is uncertain how clinicians determine what the individual needs. It would appear that those who fail to respond during the RTI process would need a comprehensive evaluation of intellectual/cognitive, academic, and psychosocial functioning to determine the unique needs of the individual. If the purpose of the RTI model is to forgo the need for standard assessment, then it seems unlikely to suppose that the model will provide all the relevant data to develop interventions tailored to the individual without further testing.

Whatever mode is chosen (i.e., RTI or IQ-achievement discrepancy), it is our belief that any procedure for identifying children as learning disabled must take into account other factors in addition to low achievement and an inability to respond to interventions. Among such factors that should be considered include a low level of intelligence, poor health, physical disabilities, limited motivation, boredom, absenteeism, emotional problems, a mismatch between the child's skills and the curriculum, learning style, cultural factors, and poor teaching. Furthermore,

clinicians should keep in mind that low scores on an achievement test do not inevitability reflect a unique disability and may simply represent the lower end of a distribution of scores. Classifying an individual as having an LD, therefore, should only be used to indicate under-achievement related to specific processing deficits whose presumed origin is neurological dys-function. Additionally, it is important to remember that a formula that uses two test scores exclusively or the results of an intervention procedure is not a viable substitute for skilled clini-cal judgment and a synthesis of all relevant information available about a child.

Placement, Instructional Planning, and Evaluation. The third purpose of assessment is place-ment, instructional planning, and evaluation of progress once a student is classified as having an LD. An Individualized Education Plan (IEP) is typically formulated and implemented soon after an LD diagnosis is determined. The IEP is a legal document that promulgated from PL 94–142 to ensure appropriate education and to guarantee the civil rights of handicapped chil-dren and their families. The intent of the IEP is to involve educators, parents, and clinicians in determining the proper level of education (e.g., special education, resource room, regular class-room) that will benefit the individual most, given the appropriate supports, services, and cur-riculum modifications (Heward, 2003). To ensure that the IEP is tailored to the specific needs of the individual, data are gathered pertaining to the student's social, academic, physical, and behavioral management problems that interfere with the acquisition of academic curriculum objectives (Rotatori & Wahlberg, 2004). Tools that may be used to gather this information include criterion-referenced assessments, curriculum-based measures, portfolio review, natu-ralistic observations, determining the individual's learning style, and a functional behavior assessment. The outcome of these types of assessments influences instructional planning, goal development, and progress monitoring.

5.3   Maintenance Factors

A major reason for the high rates of LD and the difficulties in defining the condition are related to a very heterogeneous set of symptoms. Despite these factors, there are core features, which appear to define LD. Researchers in the field stress the value of studying this condition at the macro-level to further extrapolate the underlying factors rather than studying skill deficits only (Zera & Lucian, 2001). For example, a core factor of LD appears to be that it is a neurode-velopmental condition, which is evident in the earliest stages of life. One factor researchers have been able to point to is extremely low birth weight, which is directly linked to low IQ (Anderson & Doyle, 2003; Doyle & Casalaz, 2001). While in some cases children with LD may have superior intellect, the large majority of children evince below average intelligence. Specific cognitive impairments have also been studied with respect to functional outcomes. Working memory, for example, has been studied because it affects many domains including language comprehension, writing, and reading comprehension (Gathercole, Alloway, Willis, & Adams, 2006). Furthermore, skilled readers evince better working memory than children with marked reading deficits (Swanson & Jerman, 2007). Geary, Hoard, Byrd-Craven, Nugent, and Numtee (2007) have also attested to what they call mathematical LD. These deficits are considered to be neurodevelopmental in origin, based on one prominent theory. Butterworth (1999, 2005) has applied their model to math problems, and refers to its etiology as being largely innate. Rousselle and Noel (2007), along these same lines, found that LD children were slower and less accurate when comparing Arabic numbers.

In addition to neurodevelopmental variables, environmental factors also appear to maintain and exacerbate difficulties encountered by the child with LD. For example, low achievement in school is a defining characteristic of the condition, and is correlated with a host of poor long-term outcomes including social skills deficiencies, low sociometric status, behavioral difficulties (particularly when they are externalized such as aggression or tantrums), and poor self-concept (Lambros, 1999; Sideridis, Switzky, Hickson, & Schalock, 2006). Other factors that are known to correlate with LD include low SES, being male, coming from a large family, and having a father older than 40 (Mannerkoski, Aberg, Autti, Hoikkala, Sarna, & Heiskala, 2007).

More recently, Leftwich, Montague, Scruggs, and Mastropieri (2005) note that low achievement and academic performance and a high number of negative comments by teachers were most likely to be critical variables associated with a special education placement. Thus, children identified as "at risk" are referred if they are failing academically, but are not referred if they are able to succeed. This is troublesome because low academic achievement has been found to reflect more than skill deficits in reading, writing, and arithmetic. Intertwined with academic failure is poor social interpersonal relationships, behavior problems, and motivation problems (Walker, Block-Pedego, Todis, & Severson, 1991). This point is embellished by the fact that one of the most pronounced characteristics of juvenile offenders is much poorer academic performance when compared with nondelinquent teens (Davis, Sanger, & Morris-Friehe, 1991; Finn, Stott, & Zarichny, 1988; Grigorenko, 2006). These data are consistent with a large body of research that, generally speaking, demonstrates a strong relationship between LD and a number of antisocial difficulties, challenging behaviors, psychopathology, and a host of other difficulties. Thus, LD may be conceptualized as a core set of pivotal problem behaviors, which are, at the very least, related and may contribute to other problems that can lead to life-long disabilities (Grigorenko, 2006). These data reinforce the necessity to intervene on the problems of LD. The condition does not appear to be something the child will "grow out of." Rather, these data appear to suggest that without effective treatment, LD tends to continue and other serious problems of adjustment tend to coalesce around it. Therefore, treatment of LD would appear to be a high priority for professionals.

5.4   Mechanisms of Change

While political and social factors guide the development of issues in developmental disabilities and mental health for children, no topic is more politically charged than LD. This government and legal intervention has been a primary mechanism for change in the LD field. The Americans with Disabilities Act in 1990 (PL 101–336) (Henderson, 2001) is perhaps the most prominent of these forces, and has had a profound effect on LD nationally. This act is civil rights legislation that applies to almost every phase of American life and requires "reasonable accommodations" for all persons with disabilities. The ADA defines impairment as physical or mental. LD is covered under the ADA definition and is further underscored by the definition presented in the Federal Register (1999). These criteria for LD include perceptual disabilities such as brain injury, dyslexia, and aphasia, and the presence of academic difficulties. They also include minimal brain dysfunction. However, as a practical matter, this behavior has not been adequately defined and it cannot be measured in a reliable or valid manner. In addition to requiring specific interventions for children identified as having LD, a secondary effect has been a dramatic

increase in the number of people identified as LD. From 1976 to the present, the number of identified cases has tripled (Grant et al., 2004).

A second major change mechanism with respect to LD is the adoption of what proponents describe as an "inclusion model" of education. Rather than providing specialized services in a homogenous setting, from the standpoint of skill level, inclusion advocates suggest teaching children with myriad levels of skill sets and abilities in the same setting. This model has gained considerable traction not only in the U.S. but internationally (Lambe, 2007; Mdikana, Ntsangase, & Mayekiso, 2007; Obeng, 2007; Raver, 2007). This approach cannot be overestimated in its impact on how children with LD are educated. However, few specific evidence-based methods of intervention are typically discussed with respect to this change model. Rather, emphasis is on "integration" of LD children into mainstream education, training teachers about the "values" of inclusion, including core courses in special education for general elementary education, ensuring that adequate resources are available to promote inclusion, practice teacher placements in inclusive classrooms, and teaching strategies that take into account sameness while paying proper regard to differences and diversity of learners. Little has been done to study the actual outcomes of many of these goals. However, they are widespread and likely to continue to be seen as a major change agent in schools for some time to come. We stress the importance of operationalizing problems and experimentally testing treatment methods. The framework of applied behavior analysis (ABA) seems to best fit these criteria for evidence-based treatments. The ABA model is compatible with government mandates and an inclusive model, the two most prevalent change mechanisms in LD. A review of specific treatments will be covered next.

5.5   Evidence-Based Treatment Approaches

The development and application of evidence-based treatments can be particularly challenging for children with LD. This circumstance exists because of the large number of interventions with minimal or no research to support them. Many of these treatments are spread by word of mouth. One of the greatest challenges for the clinician is to educate and, if possible, convince parents, teachers, and other caregivers to be good consumers of evidence-based interventions rather than unproven therapies.

Tilly and Speilberger (2004) do a nice job of providing an overview of many of these unsubstantiated interventions. Some of the more prominent of these techniques are: (1) modality training, (2) perceptual motor training or sensory integration training, and (3) psycholinguistic training. Modality training is determining the manner or modality in which a child learns best (i.e., visual, kinesthetic, or auditory learner) and then matching the intervention to the individual's strengths. For example, a child who is a kinesthetic learner is taught vocabulary words by "finger spelling" each word in the air to gain an understanding of the physical sensation of writing the word. Perceptual motor training (a.k.a., sensory integration training) involves practicing particular motor skills. One of the most unusual procedures involves having the child practice crawling using left-to-right movements. This is also referred to as "patterning." The idea is that improved left-to-right crawling movements will generalize to the left-to-right movement in reading. Brain Gym is another method practitioners of the technique claim is useful. However, as with patterning, no evidence exists to support the procedure. The developers of Brain Gym stress that improvements in thinking and learning can

occur by increasing physical movement. This added motor behavior is believed to improve neuromuscular routes and, thus, cognitive skills (Hannaford, 1997). For example, prior to taking a test, students are encouraged to drink a glass of cold water to facilitate relaxation and increase concentration, which will allow a person to perform to the best of their abilities. Yet another technique touted to have some utility involves increasing handwriting speed. Developers of this method claim that this approach enhances learning and self-esteem (Boyle, 2007). Finally, psycholinguistic training is an approach to intervention where individuals are trained on the discrete psycholinguistic deficits (i.e., auditory and visual reception, auditory and visual association, verbal expression, manual expression, grammatic closure, visual closure, and auditory and visual sequential memory) they are believed to be deficient in.

There are many other methods that have been employed with LD children. However, evidence-based for us means well-conducted studies using conventional research or single-case designs to validate the procedures. Furthermore, the effects of the procedure should have been replicated in a number of studies. Using this set of criteria, we arrived at a variety of ABA procedures for use in remediating LD. Bredberg and Siegel (2001) break these procedures into three general categories: (1) develop fundamental reading skills such as phonological decoding and word identification, (2) social skills and psychopathology, and (3) to enhance academic performance. We will briefly discuss each of these categories and offer the reader a synthesized set of empirically based interventions. The list of interventions given is by no means exhaustive; however, it is felt that the selected studies provide a general framework on which a clinician may base a cohesive "treatment package."

5.5.1 Reading Skills

Reading is a particularly difficult skill to master and, consequently, is the most common form of LD. Estimates of up to 60–90% of all children identified as having an LD are given that classification due to reading difficulties (Kavale & Reese, 1992; Lerner, 1989). Of all those diagnosed with LD, the majority have deficits in reading. In addition, deficits in basic reading skills (i.e., phonological awareness, decoding and recognition, comprehension, and drawing inferences) tend to be the most prevalent in children who have LD (Carlisle, 1999; Tractenberg, 2002). Difficulties in the rudimentary skills prove to be problematic, especially as academic expectations shift from learning to read to more complex tasks such as expository reading, mathematical word problem solving, and narrative writing (Barton, 1997; Berkeley, 2007). For an individual with LD, deficits in reading can hinder success in many areas of academic instruction and can have deleterious effects in multiple domains later in adulthood. A longitudinal study by Shaywitz, Fletcher, and Shaywitz (1994) found that approximately 74% of children identified as reading disabled in the third grade continued to manifest reading difficulties throughout high school, despite the fact that many received special education.

Because of the significant effects that reading difficulties have on a person's academic, social, and occupational well-being, a substantial amount of research in the area of prevention and remediation of reading problems has taken place in the last decade. This has occurred, primarily, as a result of an increase in emphasis for evidence-based treatments in the educational and LD literature. Interventions to increase reading ability must, first, take into account the skill set of the child with LD. A child with LD does not evince reading deficits in the same way when compared with other children with LD and non-LD children; therefore, clinicians must

consider a child's specific strengths and weaknesses. The comprehensive evaluation that gave the diagnostic classification of an LD is a good resource to refer to when determining what skills to target for intervention.

There are many simple and effective methods that can be used to increase proficiency in the basic reading skills of phonics and word recognition. Strategies such as using appropriate-level materials, repetition, consistency, reinforcement, previewing materials, drills, choral or paired reading, a token economy, error correction, and immediate feedback are easy to implement and have been found to lead to improvements in a child's ability to read and understand printed text (Carnine, Silbert, Kame'enui, & Tarver, 2004; Mastropieri, Leinart, & Scruggs, 1999; O'Connor, Bell, & Harry, 2002; Rankhorn, England, Collins, Lockavitch, & Algozzine, 1998). Increasing the basic requisites is a good starting point for intervention, given that most children with reading difficulties experience problems at the rudimentary level and these skills are essential for more complex reading skills such as reading fluency, comprehension, and spelling (Mastropieri & Scruggs, 1997; Mastropieri, Scruggs, Bakken, & Whedon, 1996). Additionally, children who have a solid grasp on literacy basics, such as phonemes, are more likely to achieve reading and academic success (Share, Jorm, Maclean, & Matthews, 1984).

Researchers agree that one of the most effective ways to remediate basic reading skill deficits is to implement a phonics instruction intervention (Torgesen et al., 2001; Vellutino, Scanlon, & Spearing, 1995; Wagner & Torgesen, 1987). Phonics, as per definition, is the study and manipulation of the sounds of words. To systematically teach phonics, the clinician must stress the acquisition of letter–sound correspondences and their use to read and spell words. There are several different instructional approaches that have been shown to be effective in teaching phonics to the struggling reader, including synthetic phonics, analytic phonics, embedded phonics, auditory depth discrimination, analogy phonics, onset-rhyme phonics, and phonics through spelling. While each of these programs differs across a number of features, they all effectively utilize a planned, sequential method to teach the full array of letter–sound correspondences and other phonemic elements explicitly and systematically. For this type of intervention to be effective, it must not occur in isolation and should be tailored to the individual's needs and combined with explicit, intensive, and supportive training in the use and application of the alphabetic principle, comprehension, fluency, and word recognition. This integration with other techniques will enable the individual to have a balanced reading program and will foster a better understanding of language.

As mentioned previously, utilizing a systematic approach to ameliorate phonics deficits is recommended. There are many of these types of programs; however, it does not appear that any one method of phonics instruction is superior. In a study by Torgesen et al. (2001), two phonics instruction methods, Embedded Phonics and the Auditory in-Depth Discrimination Program (ADD; Lindamood & Lindamood, 1998), were compared using 60, 8- to 10-year-old children who had previously been diagnosed as having LD and had, in addition, been determined to have severe reading difficulties. The Embedded Phonics program stimulated phonemic awareness through writing and spelling activities, taught phonemic decoding strategies directly (e.g., common spelling variations, phonetic rules and patterns, modeled by the instructor how to blend sounds, and practice) and devoted a large amount of time to reading and writing using connected text. Conversely, the ADD program taught phonemic awareness through articulatory cues (e.g., "lip poppers" or "tip tappers") and spent the majority of time building phonemic/articulatory awareness (e.g., distinguishing between mouth form and the sounds of common phonemes) and individual word-reading skills. Outcomes suggested that both programs

produced significant improvements in reading comprehension. These gains were maintained at both 1 and 2 year follow-ups. Given the results of the study by Torgesen et al., it would seem intuitive that the clinician should choose the phonics intervention based on the ability, skill set, and learning style of the child with LD since both methods were effective.

In a similar study, Rashotte, MacPhee, and Torgesen (2001) found that utilizing an integrative phonics-based approach to learn was an effective method to increase the reading ability of struggling readers. Spell Read P.A.T., the program used, is a phonological auditory training program that focuses on ameliorating reading and writing deficits through incorporating instruction in phonemic awareness, phonics, and reading and writing for meaning. The program is a three-phase hierarchy composed of a total of 140, 50-min sessions. Rashotte et al. (2001) only studied the utility of the first phase of the Spell Read P.A.T. program with 115 first-through sixth-grade impaired readers. The participants were instructed by their teachers in small groups of 3–5 students.

Each session was composed of 30 min of phonemic activities, 15 min of "share" reading, and 5 min of free writing. Phonemic activities were focused on building phonological awareness through the use of sound card activities that included building combinations of different syllables using single sounds (e.g., the student would form /sh/ /oo/ with the respective sound cards while saying each sound and then the syllable "shoo"), blending single consonant sounds with vowel sounds (e.g., the child forms the syllable "moo" with the sounds /m/ and /oo/ while sounding out the sounds and the syllable), and breaking syllables into its constituent parts (e.g., given the syllable "toy" and the sound /oy/, the student the student must sound out /t/, /oy/, and "toy"). During the "share" reading time, the students were instructed to take turns reading aloud while the teacher instructed the children to sound out unfamiliar words. Reading was reinforced with verbal praise. Next, the teacher led a discussion about the material to increase comprehension. The end of each session concluded with free writing where each student wrote about what they read. Rashotte et al. (2001) found that, in small groups, the intensive auditory training program significantly increased the phonological awareness, decoding, reading accuracy, comprehension, and spelling skills of the children regardless of grade or level of reading deficiency.

While it is suggested that increasing the basic reading skills in a child with LD is crucial, the competent clinician must also incorporate strategies that will increase reading fluency and comprehension. These are also necessary elements to fostering a solid reading foundation. One approach that has been shown by numerous researchers to increase reading fluency is the method of repeated reading. To implement this simple technique, children identified as having reading difficulties are given short reading passages that contain simple and easily recognizable words. They are then asked to read the passage repeatedly until a predetermined fluency criterion is attained, at which point they begin reading a new passage. The logic behind this approach is that repetition of unknown text until fluency is reached aids in the solidification of the material into memory, thereby enabling the person to rely more on their memory to assist them.

Using a parent implemented protocol, Burns and Kondrick (1998) utilized the repeated reading paradigm to increase the word comprehension of 10 third- and fourth-grade children with LD who were struggling readers. Each therapy session was divided into four phases: single-word flash card drills, paragraph reading drills, story reading drills, and comprehension questions. During each phase, the parent prompted the child to read the specific material aloud. Correct responses (i.e., reading a single word, paragraph, or story without error or answering a comprehension questions correctly) were rewarded with a token that could later be exchanged for money. If an error was made, the parent assisted the child in sounding out the word. Then,

the child had to repeat the word aloud. This procedure continued until each stimulus (e.g., word, paragraph, or story) was read without error. The children also completed comprehension questions after the story reading phase and were given a vocabulary review test to check their proficiency with the material. It is noteworthy to mention that the difficulty of the reading materials began with first-grade curriculum and progressed sequentially up to a fifth-grade level. All the children showed significant gains on standardized measures of reading aptitude and had, in addition, increases in their self-perception of his or her competence in reading.

Similar strategies to Burns and Kondrick's (1998) intervention have been used by other researchers and have shown that success can be achieved with repeated reading through a variety of modes such as teacher models (O'Donnell, McLaughlin, & Weber, 2003), a peer reading buddy (Gut, Bishop-Goforth, & Farmer, 2004), and books on audiotape (Daly & Martens, 1994). A study by Rankhorn et al. (1998) stressed that repeated reading's success is dependent on the use of age-appropriate materials, promoting independent reading, repetition, consistency, reinforcement, and immediate feedback and correction. The intervention implemented by Rankhorn et al. involved using a failure-free reading program for 30 min a day over a period of 7 months. In addition, the printed text was simple, controlled, and easy to understand. Children were encouraged to preview the material to be read, listen to the story being read, answer factual, inferential, and learning questions, and read and review the material.

Another method that can be used to increase the reading ability of children with LD is peer tutoring. Most researchers who utilize a peer tutoring method focus on the use of a collaborative modeling method where children with reading difficulties are paired with a more proficient same-aged peer in their class. Mathes, Howard, Allen, and Fuchs (1998) used a peer-assisted learning strategy with 32 first graders who were identified as being at risk for a reading disability. The child and their partner were guided through activities focused on sounds, words, and reading aloud. During these activities, each child took turns completing the activity. The stronger reader always went first so as to provide a model to the weaker reader. The teacher gave instructions to all the children on how to correct errors (e.g., point out the word, pronounce the word, and have the weaker student say the word) and how to ask comprehension questions during the partner read-aloud phase. Outcomes suggested that the intervention was successful in improving the reading skills (e.g., reading fluency, comprehension, phonemic skills, and word recognition) of the at-risk participants and, alternatively, was not detrimental to the stronger readers.

While peer tutoring may not be a feasible option for the clinician, the logic behind this method of remediating reading difficulties would be easy to incorporate into a more user-friendly mode of intervention. The rationale behind collaborating with a more proficient reader is to give the struggling reader a model of the correct language of reading (i.e., grammar, phonetics, tone modulations, etc.). Therefore, any individual (e.g., clinician, sibling, parent, caregiver, etc.) who is a fluent reader can fulfill the role of the tutor (Nes, 2003). A method similar to the one used by Mathes et al. (1998) can also be used to teach phonics and word recognition. Strategies such as modeling and imitation using flashcards or an audiotape (Chiang, Thorpe, & Darch, 1980; Freeman & McLaughlin, 1984) and antecedent and contingent modeling (Hendrickson, Roberts, & Shores, 1978) can be used in lieu of narrative reading.

The use of graphic organizers in school curriculum has been shown by researchers to be another effective tool to increase reading comprehension of children with LD. Graphic organizers such as story maps, semantic organizers, framed outlines, and Venn diagrams are visual and spatial displays designed to facilitate the learning of textual material. Through the

use of arrows, lines, and a spatial arrangement to describe text content, structure, and key concepts, the material read is made more meaningful and, thus, describing text content, structure, and key concepts becomes an easier task to accomplish (Darch & Eaves, 1986). The addition of a graphic organizer, either during or after reading a passage, enables the student to connect their existing knowledge base to facilitate conceptualization and comprehension of novel or difficult material. For students with LD, being able to utilize their background knowledge in this manner can be rather difficult, as they often have a poor foundation in metacognitive skills and strategy use (Mastropieri et al., 1996). This difficulty can, subsequently, hinder their ability in assimilating, organizing, and critiquing information and in making inferences. Making the critical information of a passage easier to access through the use of a graphic organizer can help the student with LD be able to identify the most pertinent information and increase their ability to comprehend what is read.

Story maps have been shown to be one type of graphic organizer that is useful in assisting the comprehension of narrative texts in children with LD. This type of graphic organizer provides students with a visual guide to understanding and retelling stories through the identification of the most pertinent ideas and events (i.e., setting, problem, goal, action, and outcome) to establish the meaningful links between concepts or facts within a passage (Reutzel, 1985). In a study by Idol (1987), students with LD were found to use story maps effectively after their teacher properly demonstrated how a story map is utilized through modeling, prompting, error correction, and feedback. The story map procedure enabled them to substantially recall more relevant information, to answer more implicit comprehension questions about the stories, and they were able to label more parts of the story when prompted to verbally recall what was read.

As students progress though school, reading increasingly involves expository text from which students are expected to learn factual information. The scientific, technical nature of expository material is oftentimes full of abstract concepts, complex and varied syntactical structure, and may not be clearly organized (Armbruster, 1984). Because of the level of competency needed to be successful, expository text can be very problematic for the student with LD who already has difficulty with reading and studying. This, therefore, can induce a cascading effect across all the academic domains. To accommodate the difficulties associated with expository texts, graphic organizers can continue to be effective when used in combination with additional strategies such as previewing text, mnemonic devices, semantic deciphering, paraphrasing, self-questioning, and critical thinking (Boyle, 2000; Brigham, Scruggs, & Mastropieri, 1995; Wong & Jones, 1982).

5.5.2 Social Skills and Psychopathology

In addition to difficulties in learning, many children with LD also exhibit significant deficits in social competence. It has been estimated that approximately 75% of students with LD manifest some facet of social deficits that is distinguishable from typically developing same-age peers (Kavale & Forness, 1996). Furthermore, these deficits in social skills coupled with poor academic achievement increases the likelihood that the child or adolescent with LD will be rejected by his or her peers (Vaughn, Sinagub, & Kim, 2004; Weiner, 1987). This ineptitude in social interaction is primarily attributed to a lack of skills in initiating and sustaining positive social interactions (Bauminger, Edelsztein, & Morash, 2005). This deficiency translates into a lack of social insight and reciprocity, less nonverbal social interactions (Agaliotis & Kalyva, 2008),

fewer same-age friends (Wiener & Schneider, 2002), social–emotional difficulties or psychopathology (Schachter, Bless, & Bruck, 1991), a higher rate of school dropout, and conduct problems (Loeber, Lahey, & Thomas, 1991). Since social competency predicts school readiness and success throughout the lifespan, it is imperative that the clinician incorporates social skills training in any treatment of a child or adolescent diagnosed with an LD.

There are numerous intervention strategies to assist in teaching appropriate social skills to students who have an LD. The purpose of these various techniques is to enable the individual to recognize and utilize a complex set of appropriate behavioral responses, thereby allowing them to adapt to various problems that occur in social situations. For the clinician, teaching social skills requires implementing principles of effective instruction, including identifying target behavior(s), pretesting or assessment, teaching, modeling, rehearsing, role playing, behavioral contingencies, reinforcement, corrective feedback, practicing, and monitoring progress. There are various social skills that the clinician may choose to target. Included are the individual's ability to solve social or interpersonal problems and make decisions quickly, body language, adapt to situations that are new or unexpected, use coping strategies for responding to emotional upsets, communicate effectively with others, and making and maintaining friends. We suggest that a thorough assessment of the child's social ability be conducted prior to initiating any social skills training package to ensure that individual needs are met.

Prater, Bruhl, and Serna (1998) provide a good example of evidence-based social skills training for students with LDs that incorporates modeling, role-playing, and feedback. In their study, three different social skills interventions (teacher-directed instruction, a naturalistic approach, and group-think discussion) were compared. Only the teacher-directed instruction will be discussed here. The primary components of the training were modeling, verbal description, and imitation, in that order. The three skills that the researchers determined the intervention would focus on included listening, problem solving, and negotiating. Each skill was divided into a task analysis composed of small steps. For example, the task analysis for the skill of listening was broken into the following steps: (1) face the person with shoulders parallel to each other; (2) make eye contact; (3) use a relaxed facial expression; (4) stand up straight; (5) stay in close proximity. Other behaviors that the participants were encouraged to perform included head nods, respond to the person, ask for clarification, and do not interrupt. The teacher initiated each training session by talking about the specific social skill to be learned and explaining why it is important to master the skill. Next, the teacher modeled the skill steps for each task. The students were prompted to memorize and recite one skill step at a time until all steps could be recalled. Then, the teacher and student engaged in a role-playing session. After the role-play was over, the teacher provided feedback in the form of error correction and reinforcement. Role-playing continued until the child successfully engaged in each of the skill steps of the social behavior. All the children in the teacher-directed instruction significantly improved skill performance on all three social behaviors. When compared with the other two social skills intervention groups, participants who received teacher-directed instruction were better able to understand the importance of learning and use it in the classroom.

Social stories (Gray & Garand, 1993) are a cost-effective technique that could be incorporated into an effective social skills program for the student with LD. In this type of intervention, a social story is read, which depicts a central character with whom the child can identify. The central character then confronts a social situation. The reader is given a description of the behaviors, thoughts, and feelings the character has as (s)he tries to accomplish the behavioral goals identified in the story. Through the narrative, the reader is provided with a concrete

example of how a person can cope with interpersonal problems and resolve conflicts in a socially appropriate manner.

Social stories have primarily been shown to be an effective strategy to teach socially appropriate behaviors, problem-solving skills, communication skills, and play skills with children with autism spectrum disorders (Sansosti, Powell-Smith, & Kincaid, 2004). There is preliminary evidence that this technique can be used with children who have LDs.

Kalyva and Agaliotis (2008) evaluated the utility of a social story paradigm for 63 children with LD, between the ages of 10 and 12 years. These children had been previously identified as having interpersonal conflict resolution problems. Participants were divided into two groups: an experimental (i.e., received the social story intervention) and a control group (i.e., listened to and answered questions about a children's book). The social story read on eight separate occasions to the experimental group depicted a scenario where two friends were in conflict about the ownership of a favorite edible treat (e.g., chocolate). The resolution strategy proposed was compromise and sharing, as opposed to a negative outcome. Next, both groups were interviewed about conflict resolution using a different social scenario and then rated on a social skill questionnaire by the teacher. Kalyva and Agaliotis (2008) found that children in the experimental group were more likely to choose predominantly positive strategies for conflict resolution both after the intervention and at follow-up when compared with the controls. In addition, the experimental children were rated post-intervention as engaging in significantly less inappropriate social behaviors.

In a similar study, Rahill and Teglasi (2003) used a social story-based program, STORIES, to increase the social cognitions of 35 children in grades 2–6 who evinced learning, behavioral, and emotional difficulties. This program emphasized thinking and problem-solving through emotionally charged or hostile peer encounters presented in a story format. The students' ability to accurately process social cues increased markedly. Furthermore, the children were able to recall and apply a wider range of positive coping strategies than children who were in a non-specific counseling group.

Incorporating training on interpersonal problem-solving (i.e., anger management, conflict resolution, relaxation, self-monitoring, etc.) would be an appropriate addition to a social skill training program for a child with LD who experiences emotional or behavioral difficulties. The goal of training interpersonal problem-solving skills is to teach individuals how to employ a wide range of strategies that allow them to develop and maintain positive relationship with others through coping with difficult social situations, solving problems, and resolving conflict with others. To ensure successful problem resolution, the student must, at a minimum, be able to identify and define the problem, generate alternative solutions, evaluate possible consequences of each alternative, and implement the solution (Spivack, Platt, & Shure, 1976). This approach may require rehearsal and modeling. Whereas these four components are characteristic of most interpersonal problem-solving programs, many include additional components and procedures.

Amish, Gesten, Smith, Clark, and Stark (1988) conducted a social problem-solving intervention with 40 students who had serious emotional disturbances and had various degrees of learning difficulties. The intervention consisted of 15 structured lessons that occurred for approximately 40 min once a week. Throughout the duration of the program, the participants were taught six essential problem-solving steps: (1) say what the problem is and how you feel; (2) decide on a goal; (3) stop and think before you act; (4) think of many possible solutions; (5) think about the outcomes of each possible solution; and (6) find the best possible solution

and implement it. Students were asked to rehearse and implement each step during group discussion. Similar programs to the one proposed by Amish et al. (1988), such as FAST and SLAM, have also been shown to be effective in improving social problem-solving skills through the use of mnemonics, thereby making the steps easier to remember (McIntosh, Vaughn, & Bennerson, 1995; Vaughn & Lancelotta, 1990).

There are numerous intervention strategies that assist in teaching appropriate social skills to students with LD. Social stories, interpersonal problem-solving training, modeling, direct training, and role playing are just a few examples of strategies that are easy to implement and have been shown to be effective. It is important for the clinician to tailor the specific intervention to the individual needs and deficits of the child when conducting a social skills training procedure. By increasing the ability to effectively handle a myriad of social situations and resolve conflicts effectively, this will enable the individual to engage in more appropriate behaviors that are necessary to make and maintain friendships with peers. The child with LD who is able to achieve success in their social world will have more confidence and self-esteem which, as a result, may translate into better outcomes in the classroom.

5.5.3   Academic Performance

It is well known that students with LDs experience a wide range of problems with learning or performing academic skills in classroom environments. These difficulties are further exacerbated by attention deficits and inadequate self-management skills. Researchers have found that students with learning disabilities often have low levels of attention to tasks, are inattentive, easily distracted, and are dependent on teachers to mediate their learning (Larkin & Ellis, 2004). This set of factors can make it problematic for the acquisition of adequate independent work habits. Since these deficits further hinder success in academic tasks, it is imperative to develop supports and services to bolster the individual abilities of the student and enable the student to perform his or her best in the classroom.

An essential element of effective instruction for students with LD is the use of scaffolding (Coyne, Kame'enui, & Simmons, 2001). Scaffolding, in the classroom, refers to temporarily adjusting and extending instruction so that the student is challenged and able to develop new skills. To optimize a scaffolded instruction model, the individual needs of the student with LD must be considered when determining the type of task, materials, group size, pace, presentation, and so on. First described by Vygotsky (1962), scaffolding was conceived after it was observed that, when given adult assistance, children who had difficulty in learning could perform tasks they previously could not accomplish independently. The learning that occurs with scaffolding is due to, what Vygotsky termed, the *zone of proximal development*. The "zone" refers to the difference between the child's ability to independently solve problems given his or her actual developmental level and the level of potential development given adequate supports, adult guidance, or collaboration with capable peers (p. 86). Therefore, as the child becomes more adept with problem-solving on his or her own, more control of the learning strategy is relinquished to the student. To scaffold the instruction effectively, new content is introduced in manageable steps with explicit, systematic instruction for each step and practice is provided until the student is confident and able to perform the skill independently.

There are numerous models of scaffolded instruction; however, each has the same general premise: students gradually move from more assistance to less assistance to achieve

independence (Kame'enui & Carnine, 1998). New concepts, which are meaningful and interesting to the child, are introduced just beyond the child's current level of understanding or control. Breaking the task into small steps, the instructor is able to provide specific instructions. This approach increases the likelihood that the student will achieve success with these manageable components and provides a better determination of what subskills have been mastered and what still needs additional instruction and practice. In addition to teaching in small segments, skills are systematically introduced in a hierarchy of increasing difficulty with the addition of explicit instruction techniques such as modeling, guided and independent practice, graphic organizers, previewing materials, question prompts, and feedback (Larkin & Ellis, 2004). As each step is mastered, less supports are needed as the student becomes more independent in their ability to perform the skill or strategy. Scaffolding has been shown to be an effective method of instruction for a variety of academic skills and domains. It has been criticized, nonetheless, as being extremely difficult for the typical general education classroom teacher to use. Since scaffolding is individualized to meet the needs of the student, teachers must be knowledgeable about the curriculum and the individual problems their students experience to be able to generate a variety of supports to stimulate student thinking in an appropriate direction (Stone, 2002). Given this difficulty though, the critical elements of scaffolding (e.g., providing assistance to meet student needs, motivate the child to pursue academic goals, and assist in the student becoming an independent learner) should be the building blocks of any intervention aimed at increasing the academic performance of a student with LD.

Self-monitoring is another strategy that can help facilitate independency in the classroom. This type of intervention enables the individual to learn how to regulate his or her own actions. Through providing opportunities to self-instruct, set goals, monitor their behaviors, evaluate their own learning, and provide self-reinforcement, self-monitoring facilitates, self-reliance on one's own abilities, and helps the individual to become more cognizant of his or her performance (Larkin & Ellis, 2004). This, therefore, allows the student to learn that by engaging in positive behavior leads to positive outcomes (King-Sears & Cummings, 1996). One of the goals of self-monitoring is that by increasing awareness of one's own behavior(s) in the classroom, any gains or benefits seen will generalize to other settings and situations outside of the school environment. Not only applicable to increasing academic performance (i.e., on task behavior, academic productivity, task accuracy), self-monitoring has also been shown to be an effective technique in alleviating problem behaviors and increasing pro-social behaviors (Carr & Punzo, 1993; Digangi, Maag, & Rutherford, 1991).

In a study by Rock (2005), nine children with an LD or developmental disability were taught to use a self-monitoring strategy during reading and mathematics lessons. Each child had been referred for various behavior challenges (e.g., out of seat behavior, staring, talking with peers, arguing with peers and teacher, toying with personal objects, etc.) that made independent seatwork problematic in the classroom setting. The strategy implemented, ACT-REACT, is a mnemonic device that represents a self-monitoring of attention and performance procedure that includes the following six steps: *A*rticulate your goals, *C*reate a work plan, *T*ake pictures, *R*eflect using self-talk, *E*valuate your progress, and *ACT* again. After training on how to use the mnemonic strategy, participants were instructed to monitor their progress during independent seat work in a reading or mathematics classroom. To assist them in this task, a self-monitoring think-sheet was created that stated the child's academic performance goal statement (e.g., "I will complete 15 math problems today), academic attention prompts

(e.g., "Am I staying focused and working like I am in my picture?"), and performance evaluation statement (e.g., "How many math problems did I complete?"). During each session, the participants monitored their attention or engaged in academic behavior by comparing it to a photograph that depicted on-task behavior at 5-min intervals. If their present behavior resembled the ideal behavior depicted in the photograph, they were instructed to record a check mark on their self-monitoring think-sheet. In addition, they were taught to monitor their performance by recording the number of pages read or math problems completed at the end of each 5-min interval. A multiple-baseline-across-subjects design with an embedded reversal demonstrated the value of this approach. All the participants had increases in academic productivity (i.e., total number of problems completed or pages read) and task engagement and decreases in problem behaviors.

Assistive technology is now becoming a more widely accepted practice in school curriculum. For the child with LD, incorporating the use of assistive technology in the classroom aids in making the learning environment more accessible, increases individual productivity and success, and provides alternate modes of performing academic tasks (Lewis, 1998). From low level supports, such as highlighter pens, to high-technology devices, such as computers, assistive technology can reduce various barriers to learning by presenting information in multiple modalities through the use of using programs (e.g., word processors, spelling and grammar tools, etc.) to organize writing, and by providing alternatives to how material is learned (e.g., through audiotapes, videotapes, and computers). Devices such as handheld calculators, books on tape, electronic organizers, calendar and time management programs, and digital clocks are low technology devices that are readily available for students with LDs and are easy to use. In addition, more advanced technology, such as computer-assisted instruction and videotapes, can also be effective in giving more individualized instruction when one-on-one instruction is not possible.

Hetzroni and Schrieber (2004) conducted a systematic single-subject ABAB designed study to determine the utility of using a word processor for enhancing the academic outcome of three junior high school students who were diagnosed with LD and had specific writing difficulties (e.g., illegible handwriting, made spelling mistakes, text copying difficulties, writing incomplete or illogical sentences, and poor text organization skills). In the study, the participants were instructed to answer questions presented during a classroom discussion, write an independent creative summary, and copy a list of the day's homework assignments either using paper and pencil or using a personal laptop equipped with a word processor program. The outcome indicated that there was a significant difference in the quality (i.e., number of spelling and reading errors, number of words written, and text structure and organization) between the handwritten and computer-assisted phases. When using the word processor, the participants produced written materials that had less spelling mistakes and reading errors, and had a higher overall quality of organization and structure than when they were instructed to use paper and pencils.

In a similar study using assistive technology, Herbert and Murdock (1994) contrasted computer-aided instruction output modes to support the vocabulary learning of students with LDs. The participants were given one of three output modes (no speech, synthesized speech, or digitized speech) during a computer-based vocabulary training program. Participants who received the vocabulary words in combination with either of the two speech output modes made significant improvements on post-training vocabulary tests when compared with those who did not receive the addition of speech to their training program.

5.6   Basic Competencies of the Clinician

The clinician working with LD children has three primary areas of basic competence that must be mastered. These topics include basic principles of applied behavior analysis (ABA), an understanding of federal and state definitions as well as an overview of inclusion, and third, unique characteristics of LD and typical problems that are most likely to be encountered.

ABA. An understanding of the basic operant learning principles and their application to real-world problems is a critical factor in providing treatment for the child with LD. This process is twofold. First, the clinician should have a basic understanding of terminology and concepts such as shaping, chaining, fading, reinforcement, functional assessment, and related empirically supported learning strategies. These are the building blocks of effective programming. Second, the clinician should have experience in the application of these principles to real-world problems. A common difficulty is that the clinician may be able to recite definitions of various ABA terms, but they cannot translate these definitions into working examples for real-world problems. Similarly, the novice clinician may be able to apply a procedure with one child in one setting but cannot apply this strategy to similar problems. These issues of problem and treatment strategy recognition and application are evident for a variety of LD problems of children that must be developed by practicum and related clinical experiences until the clinician has enough examples in real-world settings to be able to apply these principles on their own.

Governmental Definitions, Core Programs, Inclusion, and Advocacy. The field of LD was not born primarily from scientific inquiry, but through the influence of parents, lobbyists, and educators. Advocacy groups (e.g., Adults and Children with Learning and Developmental Disabilities (ACLD), Learning Disabilities Association of America (LDA), etc.) have developed over time to meet the clinical and educational needs of children that were not being addressed by the existing policies. The LD classification came about in response to the need to understand individual differences among children in the educational system who were of average general intelligence but evinced specific deficits in spoken and written language. An additional goal was to provide services to students who were not being adequately provided for by the general educational system. In 1968, LD became the first recognized disability to receive federal assistance. Since that time, the field of LD has progressed rapidly. The historical trends and stages have been thoroughly documented in several sources (refer to Hallahan & Cruickshank, 1973; Hallahan & Mercer, 2002; Kavale & Forness, 1985). We urge the reader to consult these additional references for a more comprehensive review.

In brief, Public Law 94–14 (The Education of all Handicapped Children Act, 1975), Public Law 101–476 (Individuals with Disability Education Act, 1990), the ADA, and the IDEA 1997 and 2004 revisions (Individuals with Disability Education Act, 1997, 2004) mandate that students who meet the federal government criteria for specific LDs receive reasonable accommodations. These statutes were created to ensure that individuals with LD are provided with a free and appropriate public education, a nondiscriminatory evaluation, and due process. Appropriate accommodations include full inclusion, mainstreaming, a one-on-one paraprofessional, a learning disability specialist or classroom, resource rooms, individualized education plans (IEP), and progress monitoring.

In addition to delineating the criteria for accommodation, the aforementioned statutes provide a federally recognized definition. LD is a special education category based on deficits in a specific academic area that are not due to low intelligence, behavioral difficulties, sensory

deficits, or environmental, cultural, or economic disadvantage. Although the definition in federal law governs the identification of and services available to children with LD, the specific guidelines for the identification and classification of learning disabled students varies from state to state. Therefore, it is up to the clinician to become familiar with his or her local and state definition and to be knowledgeable about the specific guidelines mandated for assessing and diagnosing LD.

Currently, one of the major debates in the field of LD between advocates, parents, and educators pertains to determining the most appropriate level of educational services. While the reauthorization of IDEA in 2004 provided expanded options on how to screen, assess, and categorize a learning disabled child, it left the interpretation of the "least restrictive setting" up to educators and parents. This term *restrictive*, in an educational sense, refers to the extent to which the student is educated with nondisabled peers. Therefore, with the increased emphasis on academic performance goals and measures of accountability that are consistent with standards for students without disabilities, resolving the debate of what is the proper and effective continuum of services provided to these students is imperative (Fuchs & Fuchs, 1994; Vaughn & Schumm, 1995). At the crux of the debate is determining the benefits of full *inclusion* of the child with LD versus *mainstreaming*. Inclusion refers to the integration of students with disabilities in general education classrooms for instruction and to provide additional supports to ensure success in this setting. Mainstreaming is the placement of students with disabilities at least part-time in general education classes. Advocates for full inclusion support the idea that all students with disabilities, regardless of their special education needs, should be placed in a general education setting for the duration of the school day (Dunn, 1968; Kavale & Forness, 2000). The proponents of this position assert that through inclusion, children with disabilities will become more socially and academically accepted by their peers and will be kept at a standard equal to that of their peers. On the other hand, opponents of mainstreaming suggest that general education teachers are not adequately trained, nor do they possess the ability to appropriately plan for students with special needs. Therefore, expecting general education to meet the needs of the individual is unrealistic (Vaughn & Schumm, 1995).

LD Characteristics and Associated Problems. LDs represent a heterogeneous category of academic deficits classified into seven different areas: (1) listening comprehension (receptive language; (2) oral expression (expressive language); (3) basic reading skills (phonological awareness, decoding, and word recognition); (4) reading comprehension; (5) written expression; (6) mathematics calculation; and (7) mathematics reasoning. These separate types of LDs share many common characteristics and, as such, frequently co-occur. Furthermore, there are secondary characteristics of LDs that are found in many, but not in all, cases. It is important to note that LDs are defined by the primary characteristics of the disability (i.e., specific deficits and functional problems in the development of academic skill sets), not by the secondary characteristics. Although associated problems, these characteristics might nevertheless be extremely disruptive and interfere with the child's progress in school. Therefore, just because they are secondary does not mean that they are of little consequence (Lerner, 2006; Smits-Engelsman, Wilson, Westenberg, & Duysens, 2003; Swanson, Cooney, McNamara, & Bernice, 2004).

Common secondary characteristics of LDs include deficits in fine or gross motors skills, auditory or visual perception, sustaining attention, short-term memory retention, language processing, and social competence and emotion regulation problems such as inattention, hyperactivity, noncompliance, and psychopathology. For example, children with LD are often described as not being able to attend to a task for long periods. These children may, as a result,

become restless, easily distracted, forget details, and fail to follow directions (Cutting & Denckla, 2003). Owing to these difficulties, there is an overlap between LD and Attention Deficit Hyperactivity Disorder (ADHD). Researchers suggest that approximately 30% of students with LDs are also diagnosed with ADHD, and about 30–40% of students with ADHD have a diagnosable LD (National Institute of Mental Health, 1999).

One misconception that many clinicians have is that because LDs and ADHD share many characteristics, children with LD should be diagnosed with ADHD. It is important to keep in mind that some children with LD have co-morbid ADHD, but this is not true in all cases. For the child with LD, their attention difficulties are related to the processes of learning (Cutting & Denckla, 2003). For example, they may have difficulty in staying on task, deciding what is important and what is not while listening to a lecture or reading a paragraph, and sustaining attention on particular tasks. While this can hinder their ability to stay on task and comprehend material, for two-thirds of students with LDs, these problems are not severe enough to warrant a diagnosis of ADHD (Sattler & Lowenthal, 2006). It is up to the clinician to use his or her clinical judgment to determine the pervasiveness of the individual's inattention and, if present, hyperactivity.

As mentioned previously, it has been well documented that children with LDs have secondary social–emotional and, to a lesser degree, behavioral difficulties. These issues partially arise owing to these children being reminded of his/her inabilities either through social labeling or repeated academic failure (Bryan, Burstein, & Ergul, 2004; Cooley & Ayers, 1988). This situation can translate into a host of social–emotional problems pertaining to low self-esteem, social isolation/phobia, anxiety, depression, panic, social information processing dysfunction, and frustration (Bauminger et al., 2005; Bryan et al., 2004; Svetaz, Ireland, & Blum, 2000). Clinicians should also be alert for signs that an individual with a learning disability is lonely, depressed, or suicidal. In addition, clinicians need to be competent in how to identify, screen for, and refer to the appropriate professionals who are having significant problems. Furthermore, a number of researchers' studies reported by Bryan et al. note that negative or inappropriate behaviors are indicative of students with LD. Behaviors that a clinician should expect to see include a lack of social skills, aggression, negative verbal behaviors, shyness, disruptions, insensitivity, and attention-seeking behavior. Students with LDs have also been found to be less socially accepted and, as such, often have younger friends and tend to be bullied more by same-age peers (Mishna, 2003; Weiner, 2004).

The clinician must be able to differentiate between what are the primary and secondary problems at the individualized level. For example, a child with LD may have depression because of their academic difficulties. On the other hand, a child who is clinically depressed may have academic problems owing to their depression hindering them from concentrating and performing optimally. This variable can be a major problem in diagnosis, especially since the definition of LD is one of exclusion. Therefore, a child whose primary concern is psychopathic in nature cannot be diagnosed as having an LD. This is not to say that a child with LD cannot be depressed or have some other psychopathology (Magg & Reid, 2006). One of the limitations in the perception of children with LD is that serious anxiety problems are symptomatic of the primary condition and, therefore, these symptoms are not likely to be improved without improving the primary condition first. There are many effective behaviorally oriented treatments for children with anxiety problems, which have been shown to be able to be successfully applied to children who have LDs. These direct treatments will not reduce the primary disability (i.e., the LD), but it will help to increase the child's quality of life by ameliorating those secondary issues.

5.7 Expert Competencies of the Clinician

As previously discussed, basic behavioral principles are a must for the clinician working with a child who evinces LD. However, those skills, while sufficient to carry out a treatment program for academic skills, would not be sufficient to design and monitor the effectiveness of the program. To ensure success, the expert clinician would need to have, first, an understanding of the specific treatment procedures that would have the best evidence to support them for various learning-based problems. Additionally, the therapist would need to know what assessment methods would be best for general screening and for pinpointing specific learning deficits. Along these same lines, they would need to be able to match treatments to identified deficits.

In addition to an understanding of assessment and treatment as it applies to academic issues, the issue of challenging behavior and comorbid psychopathology must be considered. Challenging behaviors such as temper tantrums, aggression, noncompliance, and a general lack of motivation are among the problems most frequently encountered with this group.

5.8 Transition from Basic Competence to Expert Competence

Transitioning from a novice to an expert clinician is essential in any area of study, but for the field of LD it is crucial. Given the nebulous state of what is known and agreed upon as evidence-based practices, proper definitions, and assessment procedures, becoming a competent and proficient professional who is able to think on his or her feet, solve problems, and make confident treatment recommendations is essential to effectively ameliorate the multifaceted nature of LDs. In any field of study, the two defining qualities of an expert are superior knowledge and a proficiency of performance within one's relevant domain of expertise (Eveleth, 1999). As mentioned previously, for the clinician working in the field of LD topics that must be in their repertoire of mastery involve behavioral principles, specific treatment procedures, supporting research, various assessment instruments and techniques, and the ability to understand and be able to apply various treatment methodologies while acknowledging the uniqueness of each individual client and their specific difficulties. This extensive domain-specific knowledge must be organized in a manner where the clinician is able to successfully access and apply such knowledge to the demands of the environment (Benderly, 1989; Chi, Glaser, & Farr, 1988). When this deep solidification of knowledge, practice, and application in one's repertoire occurs, the expert clinician is able to be effective not only because they "know" the fundamental rules and routines, but because they are able to respond from an understanding of the total situation owing to their breadth of experience. This ability enables him or her to focus specifically on only the most important aspects of a situation without wasting time on irrelevant information (Dreyfus & Dreyfus, 1986). In addition, the expert's performance is fluid, flexible, highly proficient, and is virtually automatic unless a novel problem arises for which a greater analysis is required.

As expected, moving from being a novice to being an expert is something that requires long-term commitment to learning and practice. This level of understanding is only accomplished through extensive training, practical experiences, seminars, professional education programs, and supervision by an experienced licensed professional. The clinician aiming to work with individuals with LD must be committed to life-long learning and professional development. This is attained through continually gaining practical experience while keeping abreast

of current research literature, governmental and state laws, educational policies, and using the most effective evidence-based practices. This level of competence will enable accurate clinical judgment and encourage a higher level of professionalism in a field that continues to change.

5.9   Summary

LD is perhaps the most visible of all the childhood problems encountered in the schools. It is the most common of all the disabilities. Furthermore, if left untreated, a series of additional problems can result, which are very serious. Juvenile delinquency, school failure and drop out, problems with interpersonal relationships, job loss and poor job success, drug-related problems, and many other social ills can result. LD thus places the individual at risk for a host of life-long adjustment problems. For these and related reasons, early diagnosis and intervention are essential.

In this chapter, we have highlighted the controversy that exists around the best way to assess and define LD. No resolution of the issue has occurred to date, and is not likely to occur anytime in the near future. What is clear, however, is that definition and assessment are linked and are broken down into two camps, which might best be described as a traditional psycho-metric approach using IQ scores and standardized measures of academic performance, versus an ABA approach where differential diagnosis is tied to treatment response. What both camps can agree to is that some innate deficits are likely, that the child is not intellectually disabled, and that the child is doing poorly or failing in school. Thus, the debate is more on a technical/programmatic level, based on the theoretical model one responses.

To a large extent, LD has also proven to be a fad magnet for ineffective and unsubstantiated treatments. Many of these interventions and variants of them have been in use for many years. A quick look at the internet will turn up a bewildering array of potential treatments. Most of these interventions have dramatic, often unsubstantiated claims of potential effectiveness. This situation can, of course, be a dramatic challenge to parents, other caregivers, and teachers who often do not have the time or the resources to separate the wheat from the chaff. The expert clinician then has this burden. It is his or her ethical duty to be familiar with what works and what does not work based on the available research and to communicate this information in as straightforward and nontechnical fashion as possible.

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6 Conduct Disorder and ODD

Ross W. Greene

Abstract: Social, emotional, and behavioral challenges in children are best understood through transactional models of development emphasizing factors associated with the child and environment and their reciprocal influences. Along these lines, conduct problems – often categorized as oppositional defiant disorder (ODD) and conduct disorder (CD) – can be conceived as the byproduct of incompatibility between child and environment, or what can be referred to as "child-environment incompatibility." The goal of assessment is to understand these incompatibilities; the goal of intervention is to address them. Numerous models of psychosocial treatment have been applied to conduct problems, many of them evidence-based. However, the fact that conduct problems remain a significant public health issue suggests that greater innovation in thinking and intervention are needed. The primary focus of this article was Collaborative Problem Solving, an innovative, "hybrid" psychosocial treatment model. The CPS model combines elements of social learning theory, systems theory, and research in the neurosciences, and its effectiveness has been examined in families, schools, inpatient psychiatry units, residential facilities, and juvenile detention facilities. CPS is a challenging model to implement, and effectiveness of a clinician in doing so hinges on experience and supervised practice.

6.1 Overview

Oppositional defiant disorder (ODD) refers to a recurrent childhood pattern of developmentally inappropriate levels of negativistic, defiant, disobedient, and hostile behavior toward authority figures (APA, 1994). Specific behaviors associated with ODD include temper outbursts, persistent stubbornness, resistance to directions, unwillingness to compromise, give in, or negotiate with adults or peers, deliberate or persistent testing of limits, and verbal (and minor physical) aggression. These behaviors are almost always present at home and with individuals the child knows well (APA).

The following are considered associated features of ODD (APA, 2000). As developed in this chapter, these features may have even greater implications for assessment and treatment of ODD than the specific behaviors comprising the disorder:

▶ In males, the disorder has been shown to be more prevalent among those who … have problematic temperaments (e.g., high reactivity, difficulty being soothed) or high motor activity. … there may be low self-esteem (or overly inflated self-esteem), mood lability, low frustration tolerance, swearing … and a vicious cycle in which the parent and child bring out the worst in each other. ODD is more prevalent in families … in which harsh, inconsistent, or neglectful child-rearing practices are common (pp. 100–102).

The essential feature of conduct disorder (CD) is a repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated (APA, 1994). These behaviors fall into four main groupings: aggressive conduct that causes

physical harm to other people or animals; non-aggressive conduct that causes property loss or damage; deceitfulness or theft; and serious violations of rules. Youth meeting diagnostic criteria for CD may bully, threaten, or intimidate others, initiate frequent physical fights, use a weapon that can cause serious physical harm, be physically cruel to people or animals, steal, force someone into sexual activity, destroy others' property, lie or break promises, break curfew, run away from home overnight, and skip school. The following are the associated features of CD (APA, 2000); not surprisingly, they overlap to some degree with the associated features of ODD:

► Individuals with Conduct Disorder may have little empathy and little concern for the feelings, wishes, and well-being of others. Especially in ambiguous situations, aggressive individuals with this disorder often misperceive the intentions of others as more hostile and threatening than is the case and respond with aggression that they then feel is reasonable and justified. They may be callous and lack appropriate feelings of guilt or remorse. … self-esteem may be low. … poor frustration tolerance, irritability, temper outbursts, and recklessness are frequent associated features (ppm. 93–98).

Although the validity of the taxonomy for CD has been questioned (see Tremblay, 2003), two subtypes (childhood-onset and adolescent-onset) of the disorder are presently recognized, both occurring in a mild, moderate, or severe form (APA, 2000). Youth meeting criteria for the former have more disturbed peer relationships, exhibit more persistent CD behaviors, and are more likely to develop adult anti-social personality disorder than those meeting criteria for the latter.

Two thirds of children diagnosed with ODD do not subsequently develop CD (Hinshaw, 1994; Hinshaw, Lahey, & Hart, 1993; Lahey & Loeber, 1994). Yet, CD rarely occurs outside the presence of ODD (Frick et al., 1991; Greene et al, 2002; Hinshaw et al., 1993; Lahey, Loeber, Quay, Frick, & Grimm, 1992; Loeber, Green, Lahey, Christ, & Frick, 1992), and ODD has been shown to be a significant predictor of family dysfunction and social impairment even when a wide range of other psychiatric conditions – including CD – are controlled (Greene et al., 2002). Such findings suggest that the central feature of ODD – noncompliance – confers particular risk for more serious outcomes, perhaps especially because of how it has traditionally been conceptualized and the corresponding manner to which it has been responded.

6.2   Assessment of Symptoms and Maintenance Factors

Now would probably be a good time for the author of this chapter to disclose his general lack of enthusiasm for using diagnoses to describe youth with social, emotional, and behavioral challenges. *Coming to a definitive conclusion regarding a diagnosis is not the goal of assessment*, and for several reasons. Diagnoses cannot possibly reflect the complex combination of individual and environmental factors that set the stage for disadvantageous patterns of behavior, and often serve only to "pathologize" one element of the equation (in this case, the child or adolescent). Thus, saying that an individual "has ODD" or "has CD" is, as a practical clinical matter, fairly meaningless (the need to satisfy managed care reimbursement requirements notwithstanding). As is made clear in the ensuing pages, the term "child–environment incompatibility" would be preferable. Nonetheless, for ease of exposition and the sake of familiarity, the

term "conduct problems" will be the primary descriptor for the remainder of the chapter. Yet, all too often, a diagnosis is used as the litmus test for determining treatment selection (in clinical settings), for establishing that a sample in a study was selected with sufficient rigor (in research settings), or for certifying that a child qualifies for additional services (in schools). In the case of the latter, an individual's failure to meet diagnostic criteria for a specific psychiatric disorder carries the risk of the determination that the individual "has no problems" and therefore "has no need for additional services." In this chapter, it will be assumed that if a child or an adolescent is exhibiting conduct problems, then there is most assuredly "a problem" and that the need for additional help is abundantly clear.

Before turning our attention to mechanisms of assessment, it might be a good idea to ponder what is it exactly, that we are trying to assess. The theoretical orientation of this chapter derives from research underscoring the reciprocal nature of interactions between parents and their difficult offspring (Anderson, Lytton, & Romney, 1986; Dumas & LaFreniere, 1993; Dumas, LaFreniere, & Serketich, 1995) and from models emphasizing transactional or reciprocal influences (Bell, 1968; Belsky, 1984; Chess & Thomas, 1984; Cicchetti & Lynch, 1993, 1995; Gottlieb, 1992; see Sameroff, 1975, 1995). These models posit that a child's outcome is a function of the degree of "fit" or "compatibility" between the characteristics of the child (e.g., temperament, neuropsychological profile, activity level, ability to inhibit impulses) and the characteristics of his or her environment (e.g., adult caregivers, socioeconomic status, neighborhood). Studies on the reciprocal nature of interactions between children and adults have primarily focused on children and their parents, but the model can also be applied to lesser-studied interactions between children and other important adult caregivers, such as teachers (see Greene, 1995, 1996; Greene et al., 1997). A higher degree of compatibility between child and environment is thought to contribute to optimal outcomes, whereas a lesser degree of compatibility is thought to contribute to less advantageous outcomes. From this perspective, conduct problems can be understood as one of many possible expressions of child–environment incompatibility. Indeed, it is these incompatibilities that give rise to conduct problems and these very same incompatibilities, left untreated, that further fuel and exacerbate conduct problems once they are set in motion.

Yet, much research on conduct problems (and aggression) in youth has focused on "main effects" rather than on the transactional interplay between child and environmental characteristics. An impressive, indeed daunting, array of child and environmental characteristics has been identified as contributing to the development of conduct problems. And while one could roughly summarize these characteristics as follows – "conduct problems are usually caused by the combination of a lot of really bad things" – greater specificity might be useful.

As for child characteristics, sometimes the focus has been on comorbid diagnoses. We know, for example, that it is extremely rare for conduct problems to occur outside the context of other psychiatric disorders. A majority of youth with ODD and CD has comorbid ADHD (Abikoff & Klein, 1992; Greene et al., 2002; Hinshaw et al., 1993; Lahey & Loeber, 1994). Mood and anxiety disorders (Angold & Costello, 1993; Greene et al., 2002) and language processing disorders (Beitchman, Hood, & Inglis, 1989; Beitchman, Hood, Rochon, & Peterson, 1990; Baker & Cantwell, 1987; Greene et al., 2002; Moffitt & Lynam, 1994) are common comorbidities as well.

Sometimes the focus has instead been on dimensional constructs. So it is also known that conduct problems are associated with executive skill and other neuropsychological and cognitive deficits, aggression, difficulties in emotion regulation and temperament, lack of empathy, recklessness/novelty-seeking, and poor tolerance for frustration (see Lahey & Waldman,

2003, for an excellent review), along with obsessiveness and cognitive rigidity (Garland & Weiss, 1996; Budman, Bruun, Park, & Olson, 2000).

A similarly impressive list has been compiled for environmental factors, and includes pregnancy complications (such as viral infections or mother's poor nutrition), delivery complications (such as hypoxia or lack of oxygen to the fetus during labor; see Brennan, Grekin, & Mednick, 2003, for a review), parents who are neglectful or harsh and inconsistent disciplinarians (Moffitt & Caspi, 2001), and low socioeconomic status (SES) (see Harnish, Dodge, & Valente, 1995; Kilgore, Snyder, & Lentz, 2000). Psychosocial and medical interventions applied in individual cases should also be considered important environmental factors, but are not typically taken into account by studies examining causes of conduct problems. Yet, these interventions have the potential to function (when they are effective) in a protective capacity or (when they are ineffective) to confer greater vulnerability.

So, while it might be tempting to simply engage in a mechanical process of counting risk factors to explain a child's developmental progression to conduct problems, or to identify one or two factors that seem to exert the greatest impact (in other words, true "main effects"), such an endeavor would move us further away from the ultimate goal of assessment: *to achieve an understanding of the incompatibilities between characteristics of a child and his or her environment and, based on this understanding, to pinpoint potential factors to be addressed by intervention.*

In other words, it is good to know that a child or adolescent has or had difficult temperament, high motor activity, mood lability or irritability, low frustration tolerance, a lack of empathy or concern for the feelings, wishes, and well-being of others, and/or misperceptions of the intentions of others (known as cognitive distortions or cognitive biases). But it is worth noting that, taken independently, these characteristics do not usually lead to serious conduct problems. Thus, there must be some other dynamic at work: namely, how these characteristics influence and are influenced by characteristics of the environment (parents' marital discord, parents' harsh and inconsistent parenting practices, access to quality mental health care, interventions that were or were not effective) in ways that increase or decrease incompatibility and thereby heighten or reduce the likelihood of advantageous or disadvantageous outcomes.

Child–environment incompatibility can begin even before a child is born (for example, if the mother is exposing the fetus to substances that are not conducive to optimal development), but it is at the point at which it exceeds the "threshold of adversity" that conduct problems (and other disadvantageous outcomes) can be expected to emerge. The earlier the threshold of adversity is reached, the more disadvantageous the long-term outcome is likely to be. Of course, as noted by Lahey and Waldman (2003), even in youth whose conduct problems appear in adolescence, these problems do not "come (from) out of nowhere." Early child–environment incompatibility may be manifested in many different ways, but it is the onset of chronic child noncompliance – again, the core feature of ODD – that is perhaps the clearest signal.

Let us consider briefly why this might be the case. As I have written elsewhere (e.g., Greene & Doyle, 1999; Greene, Ablon, & Goring, 2003), the skill of compliance – defined as the capacity to defer or delay one's own goals in response to the imposed goals or standards of an authority figure – can be viewed as one of many developmental expressions of a young child's evolving capacities for self-regulation and affective modulation (also see Amsel, 1990; Hoffman, 1975; Kochanska, 1995; Kopp, 1982; Stifter, Spinrad, & Braungart-Rieker, 1999). Demands for self-regulation and affective modulation begin at birth, and more sophisticated mechanisms for these skills develop as children mature, but most dramatically during the toddler years,

when children learn to use language to label and communicate their thoughts and feelings, develop cognitive schemas related to cause-and-effect, and generate and internalize strategies aimed at facilitating advantageous interactions with the environment (Kopp, 1989; Mischel, 1983). But these skills do not develop independently of environmental influences and environmental influences typically do not occur in a vacuum. Compliance can therefore be viewed not only as a complex skill and as a critical milestone on the trajectory of emerging self-regulation and affective modulation in a child (Hoffman, 1983; Kochanska & Askan, 1995; Kopp, 1989), but also as a primary indicator of compatibility between a child and his or her environment.

Thus, true to our definition of assessment – *to achieve an understanding of the incompatibilities between the characteristics of a child and his or her environment and, based on this understanding, to pinpoint potential factors to be addressed by intervention* – assessment should examine any and all incompatibilities between child and environment, with an emphasis on (but not limited to) factors known to contribute to the development of conduct problems.

A variety of assessment instruments would be useful (and others perhaps less useful) in this endeavor. A *situational analysis* provides indispensable information about the conditions under which child–environment incompatibility occurs. In other words, with *whom* (mother, father, peers, sibling, teacher, soccer coach), *when* (when hanging out with peers outside of adult supervision, when asked to perform a difficult academic task, when truant from school), and *where* (at a peer's apartment, in his own home, between classes at school, in math class, on the school bus) are conduct problems occurring? Be forewarned: often those upon whom the assessor is relying for assessment information may not be highly skilled at thinking about behavior in situational terms (they may be more naturally inclined to view behaviors as reflective of unvarying "traits"). Sometimes asking reporters to recount (in story form) situations in which conduct problems occurred can be a useful device. More fair warning: the stories are likely to begin with a description of the behaviors themselves (understandable, since the behaviors are usually the primary concern of the reporters) rather than a description of the conditions that preceded the behaviors (this information should be much more important to assessors). Thus, it is often necessary to ask reporters to "rewind the tape" so as to uncover the actual circumstances leading up to the problematic behavior, which are usually more complicated than originally presented.

In gathering information about the contexts and conditions under which conduct problems occur, assessors gather information about the characteristics of the child and environment contributing to incompatibility. In other words, embedded within every "incompatibility episode" are clues about the temperament, expectations, cognitive biases and distortions, belief systems, frustration tolerances, problem-solving skills, flexibility, and social skills of the interaction partners, and disciplinary practices of the adult caregivers. Such clues provide opportunities to gather much more detailed information in these domains.

In an effort to capture the above assessment information, I have developed a "discussion guide" (regrettably, it does look a bit like a checklist) called the *Assessment of Lagging Skills and Unsolved Problems* (ALSUP), which is comprised of a list of the skills found lagging in children with social, emotional, and behavioral challenges, as well as a list of the unsolved problems that commonly precipitate incompatibility episodes. Note that the ALSUP has not been developmentally normed, for it is intended to serve as a means of taking a highly individualized look at the lagging skills and unsolved problems relevant to a specific child rather than coming to conclusions about whether the child "has a problem" based on comparison to individuals of the same age, grade, or gender. In other words, if a child is having difficulty communicating his

needs or concerns to those around him, and if this difficulty is contributing to incompatibility episodes, then there is most assuredly "a problem," whether the child is a 2-year-old female or a 17-year-old male. The ALSUP is shown in ⊙ Table 6.1.

Because conduct problems do not occur in a vacuum, a *developmental history* is the mechanism through which information about all these domains can be placed in an historical context and a general sense can be obtained of duration of child–environment incompatibility. What was the child like as an infant? What were the subjective and overt responses of the adult caregivers? When did the caregivers first notice "behavior problems" in their child? What was their understanding of, and response to, these behavior problems? Were there any extenuating circumstances affecting the caregivers or family at the time behavior problems emerged or at any other point in the child's development?

Along these lines, a *school history* will also be crucial. Anecdotally, children and adolescents whose conduct problems occur cross-situationally (i.e., at home *and* at school) tend to have a more difficult behavioral profile and tend to be more difficult to treat than children whose difficulties are confined to the home environment. Are conduct problems occurring at school? Under what conditions and with what interaction partners are these problems occurring? To what degree do "incompatibility episodes" coincide with particular academic demands, or in unstructured situations, or with certain peers or teachers? Is the child accessing the school discipline program, and to what degree has the program been effective (if, as is often the case, the child is accessing the school discipline program frequently, then the ineffectiveness of the program is probably self-evident)?

It will also be important to gather information about the *treatment history* of the child and key adult caregivers; as noted above, ineffective prior treatment can fuel alienation, hopelessness, and cynicism and can color an individual's perspective on the prospects for current treatment and must be taken into account in formulating treatment plans (some of the most difficult-to-treat children have bounced from one treatment program to another, and have lost faith that the "system" will ever be helpful). What was the nature of the prior treatment? Individual therapy? Family therapy? Parent management training? Was the treatment effective or did it exacerbate or increase the frequency of incompatibility episodes? Why was it terminated? What does this tell us about the expectations of those involved and the degree to which they were able to participate in treatment and execute treatment recommendations? Have any diagnoses been rendered? How do the different interaction partners understand the meaning of the diagnoses? Has psychotropic medication ever been prescribed for any of the interaction partners? What were the target symptoms of the medication? Was the medication helpful?

Given the prior discussion as to cognitive factors contributing to the development of conduct problems, the assessor should also inquire about prior *formal assessment* that may have been conducted, both for the purposes of recommending such assessment (if it is needed) and for obtaining additional information about the general cognitive skills, executive skills, language processing skills, and other cognitive factors that may have bearing on interactions between a child and key people in his or her environment.

The behavior checklist is very common tool for assessing children, and many instruments are available for assessing conduct problems (see AACAP, 1997, 2007). While such "objective" instruments do provide an efficient overview of the problematic behaviors a child is exhibiting, there are important limitations to their use. They tend to focus on only one element of child–environment incompatibility (the child) and therefore tend to steer assessment in a direction that pathologizes children (rather than in the direction of examining incompatibilities between

◘ **Table 6.1**

Assessment of Lagging Skills and Unsolved Problems

Assessment of Lagging Skills and Unsolved Problems (Rev. 12/5/08)	
Child's Name	Date
LAGGING SKILLS	
Difficulty handling transitions, shifting from one mind-set or task to another (shifting cognitive set)	
Difficulty doing things in a logical sequence or prescribed order	
Difficulty persisting on challenging or tedious tasks	
Poor sense of time	
Difficulty reflecting on multiple thoughts or ideas simultaneously	
Difficulty maintaining focus for goal-directed problem-solving	
Difficulty considering the likely outcomes or consequences of actions (impulsive)	
Difficulty considering a range of solutions to a problem	
Difficulty expressing concerns, needs, or thoughts in words	
Difficulty understanding what is being said	
Difficulty managing emotional response to frustration so as to think rationally (separation of affect)	
Chronic irritability and/or anxiety significantly impede capacity for problem-solving	
Difficulty seeing the "grays"/concrete, literal, black-and-white, thinking	
Difficulty deviating from rules, routine, original plan	
Difficulty handling unpredictability, ambiguity, uncertainty, novelty	
Difficulty shifting from original idea or solution/difficulty adapting to changes in plan or new rules	
Difficulty taking into account situational factors that would suggest the need to adjust a plan of action	
Inflexible, inaccurate interpretations/cognitive distortions or biases (e.g., "Everyone's out to get me," "Nobody likes me," "You always blame me," "It's not fair," "I'm stupid")	
Difficulty attending to or accurately interpreting social cues/poor perception of social nuances	
Difficulty starting conversations, entering groups, connecting with people/lacks other basic social skills	
Difficulty seeking attention in appropriate ways	
Difficulty appreciating how his/her behavior is affecting other people	
Difficulty empathizing with others, appreciating another person's perspective or point-of-view	
Difficulty appreciating how s/he is coming across or being perceived by others	
UNSOLVED PROBLEMS	
HOME	
Waking up/getting out of bed in the morning	
Completing morning routine/getting ready for school	
Sensory hypersensitivities	
Starting or completing homework or a particular academic task	

(continued)

◘ **Table 6.1** (continued)

Assessment of Lagging Skills and Unsolved Problems (Rev. 12/5/08)
UNSOLVED PROBLEMS (cont.)
Food quantities/choices/preferences/timing
Time spent in front of a screen (TV, video games, computer)
Going to/getting ready for bed at night
Boredom
Sibling interactions
Cleaning room/completing household chores
Taking medicine
Riding in car/wearing seatbelt
SCHOOL
Shifting from one specific task to another (specify)
Getting started on/completing class assignment (specify)
Interactions with a particular classmate/teacher (specify)
Behavior in hallway/at recess/in cafeteria/on school bus/waiting in line (specify)
Talking at appropriate times
Specific academic tasks/demands, e.g., writing assignments (specify)
Handling disappointment/losing at a game/not coming in first/not being first in line (specify)
OTHERS (list)

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characteristics of a child and his environments). Thus, they tend to provide very little information about the expectations, biases, disciplinary practices, and other characteristics of the important adult caregivers doing the checking and how these characteristics influence, and are influenced by, characteristics of the child.

Another common assessment practice, perhaps especially in schools, is the "functional assessment," which is based on the belief that a given behavior is "working" at (or serves the function of) getting a child something he wants (for example, attention) or enabling the child to escape or avoid something unpleasant, difficult, tedious, or uncomfortable (for example, homework). However, this definition of function tends to lead to interventions aimed at convincing a child that his behavior will not work (this is usually accomplished through use of punishment) or encouraging the performance of replacement behaviors that adults believe will work better (this is usually accomplished through use of incentives). Interestingly, such interventions are sometimes characterized as being reflective of transactional thinking, perhaps because they involve both interaction partners (the child, who is now on the receiving end of formal, imposed consequences, and the adults, who are now on the administering end). Yet, the logic of this form of intervention could well be called into question if the goal was to address the transactional processes known to contribute to the development of conduct problems.

Elsewhere (Greene, 2008), I have recommended a revised conceptualization of function, flowing from the following questions: If a child had the skills to go about getting, escaping, and

avoiding in an adaptive fashion, then why is she or he going about getting, escaping, and avoiding in such a maladaptive fashion? The fact that the child is going about getting, escaping, and avoiding in a maladaptive fashion is evidence of the fact that she or he does not have the skills to go about getting, escaping, and avoiding in an adaptive fashion. As described below, this definition of function leads to interventions aimed at teaching skills and solving the problems that are giving rise to child–environment incompatibility in ways that are realistic and mutually satisfactory.

6.3 Evidence-Based Treatment Approaches

Diverse psychosocial treatment approaches have been applied to children's conduct problems. Models known alternatively as "parent training" (PT) and "behavioral family therapy" have focused primarily on altering patterns of parental discipline that contribute to the development of oppositional behavior and problematic parent–child exchanges (McMahon & Wells, 1998). Skills typically taught to parents in such models include positive attending, use of appropriate commands, contingent attention and reinforcement, and use of a time-out procedure (see McMahon & Wells). In general, research has documented the efficacy of these procedures (see Brestan & Eyberg, 1998, for a comprehensive review), and several intervention programs emanating from these models have been identified as either "well-established" (the *Living with Children* program [Patterson & Gullion, 1968] and videotape modeling parent training [Webster-Stratton, 1984, 1990, 1994]) or as "probably efficacious" (including parent–child interaction therapy [Eyberg, Boggs, & Algina, 1995]).

However, this same body of research has also documented various limitations of PT. First, parents receiving PT often do not fully comply with implementation or drop out of treatment altogether (e.g., Prinz & Miller, 1994), suggesting that this form of intervention may, in fact, not be well-matched to the needs and characteristics of many of those responsible for implementation. Most studies examining efficacy of PT have presented data only for those who remained in treatment rather than those who began treatment. Among those who remain in treatment, PT has been shown to produce statistically significant changes in oppositional behavior, but very few studies have reported clinically significant changes (Kazdin, 1997). Indeed, 30–40% of those children remaining in treatment continue to evidence behavior problems in the clinical range at follow-up (Webster-Stratton, 1990). Data have shown that a significant percentage of children – perhaps higher than 50% – are not functioning within the normal range when such treatment is completed (Dishion & Patterson, 1992). Finally, most studies examining efficacy of PT have not included clinically referred youth (Kazdin; Patterson & Chamberlain, 1994), and have typically failed to examine long-term treatment effects (Kazdin, 1993, 1997). In view of these limitations, it is reasonable to conclude the following about PT: (a) a meaningful percentage of children and parents do not derive substantial benefit from PT; and therefore (b) alternative treatments that more adequately address the needs of these children and parents must be developed and studied (Greene, 2005).

Alternative models of intervention have placed relatively greater emphasis on *cognitive* factors underlying ODD rather than on behavior per se (see Coie & Dodge, 1998; Crick & Dodge, 1996; Kendall, 1985; 1991; Kendall & MacDonald, 1993), and emanate from research highlighting the frustration and emotional arousal that often accompany externally imposed demands for compliance. As described above, a variety of factors may compromise a child's skills in these domains, and these alternative models of intervention have focused on addressing

the cognitive deficiencies and distortions of oppositional or aggressive children. Several such intervention models have been identified as "probably efficacious," including problem-solving training (Kazdin, Esveldt-Dawson, French, & Unis, 1987; Kazdin, Siegel, & Bass, 1992), anger management programs (Feindler, 1990, 1991, 1995; Lochman, 1992; Loch-man, Burch, Curry, & Lampron, 1984; Lochman, Lampron, Gemmer, & Harris, 1987), and multisystemic therapy (Henggeler, Melton, & Smith, 1992).

A fairly recent addition to the array of evidence-based psychosocial treatment options for conduct problems is a model of care called Collaborative Problem Solving (CPS; Greene, 1998, 2001, 2005, 2008). The CPS model aims to help adults (1) conceptualize children's social, emotional, and behavioral challenges as a byproduct of lagging cognitive skills and unsolved problems, in other words, as a form of developmental delay; (2) identify, in each child, the lagging skills underlying, and unsolved problems precipitating, incompatibility episodes; and (3) to begin using a collaborative approach to problem solving to address, in a realistic and mutually satisfactory manner, predictable, long-standing issues of disagreement so as to reduce the likelihood of incompatibility episodes and increase child–environment compatibility. Research has shown that the model is effective in both outpatient (Greene et al., 2004) and inpatient (Greene, Ablon, & Martin, 2006; Martin, Krieg, Esposito, Stubbe, & Cardona, 2008) settings. Because the mechanisms of change and basic competencies of clinicians in treating conduct problems differ across the different psychosocial treatment approaches, and because the CPS model is the expertise of the author, these mechanisms and competencies are discussed for the remainder of this chapter as they apply specifically to this model.

6.4   Mechanisms of Change Underlying the Intervention

From a transactional perspective, *the goal of treatment is to improve child–environment compatibility*. So, how can the CPS model be considered transactional if it primarily targets the lagging skills of the child? The answer: it could not, and the CPS model does not. So it might be instructive to distinguish between theory and good strategy. Adults who live or work with children with conduct problems are typically quite convinced that it is the "identified patient" (the child) who has "the problem." Trying to dissuade adults from this perspective too quickly can cause them to precipitously abandon the therapeutic ship. While adult caretakers will doubtless need to be convinced of their role in incompatibility episodes, timing is everything. But let there be no doubt, the lagging skills listed on the ALSUP may be just as applicable to adults. Moreover, unsolved problems typically involve two interaction partners, and the practice of collaboratively solving problems provides an opportunity for all interaction partners to participate in the problem-solving process and learn new skills.

This does not mean that all interaction partners must always receive direct treatment for child–environment incompatibility to be impacted. Some distinctly unidirectional interventions – pharmacotherapy being an obvious example – can have a significant impact on child–environment incompatibility, even though all of the interaction partners are not directly receiving treatment. For example, it is entirely possible that, by reducing a child's hyperactivity and poor impulse control through use of stimulant medication, important elements setting the stage for child–environment incompatibility would be addressed and incompatibility episodes would be dramatically reduced. However, if it is also the case that adult caregivers have, for example, unrealistic academic and behavioral expectations or unrealistic notions about changes

that will be achieved through administration of stimulant medication, then, even if a child had a positive response to the medication, child–environment incompatibility might not be sufficiently impacted and treatment would need to be expanded to factors unaffected by the initial intervention.

Let us consider in greater detail each of the three treatment components delineated in the last section, for each has implications for the mechanisms of change involved in the CPS model.

1. *Conceptualize children's social, emotional, and behavioral challenges as a byproduct of lagging cognitive skills and unsolved problems.* For many adults, CPS involves a paradigm shift. Helping adults – parents, teachers, or staff in an inpatient, residential, or juvenile detention setting – understand how a child came to develop conduct problems so as to view the child through accurate, compassionate lenses, is an indispensable (and usually first) component of CPS treatment. This shift alone can have dramatic effects on adult–child interactions, but also sets the stage for subsequent intervention ingredients. Some adults do not readily abandon their pre-existing paradigms, and may need some evidence that the CPS model is going to improve their lives before they adjust their thinking.

Parents often bring children and adolescents who are exhibiting conduct problems into treatment asking the question, "What should I do?" The first goal is to help parents shift, at least initially, to a different set of questions ("Why is my child acting this way and why is what seems to work with other children not working with this one?"), because it will be very difficult to answer the former without first considering the latter. In schools and treatment facilities, unidirectional explanations that imply intent (e.g., attention-seeking, manipulative, coercive, limit-testing, unmotivated), labels that imply fixed character (e.g., sociopath, psychopath, conduct disordered), and explanations that elevate some of the facts that are known about a child to "causal status" ("he was born addicted to cocaine," "his parents are divorced," "his mother's crazy," "his father's in jail," "you know what neighborhood he lives in," "his brother's the same way") often color the perspectives of those responsible for intervention. Moreover, children who have evidenced conduct problems for many years often come with large "portfolios" filled with massive and overwhelming amounts of information, prior testing, and past treatment plans. In CPS, there are two important "filters" for sorting through this information: *lagging skills* and *unsolved problems*. While much of a child's history is interesting as background information – typically providing countless sobering examples of child–environment incompatibility – the goal is to identify "actionable" information. The advantage of focusing on lagging skills and unsolved problems is that the skills can be taught and the problems solved; thus, these filters may be more likely to set the stage for productive, systematic intervention than focusing on past events about which the child, and those trying to help him, can do little to change.

2. *Identify, in each child, the lagging skills underlying, and unsolved problems precipitating, incompatibility episodes.* In CPS, treatment is highly individualized. Each child has a unique profile of lagging skills (in the parlance of CPS, lagging skills are the "why" of challenging behavior) and unsolved problems (the "who, what, where, and when" of challenging behavior), and it is crucial for the key adults who interact with a child to come to a consensus about his or her specific lagging skills and unsolved problems and, as part of this process, to establish priorities for what to begin working on first (because it will not be possible to "fix everything at once"). The ALSUP will be an important tool for these purposes. This process, and the consensus that emerges from it, propel CPS treatment into its next phase.

Yet, this consensus can be particularly difficult to achieve in schools and treatment facilities, where communication can be challenging across classes and shifts and where, therefore, it can be extremely difficult to intervene in a cohesive, consistent manner in which the "left hand knows what the right hand is doing." Of course, CPS is not the only model of treatment requiring good communication; any *effective* model of care has the same requirement. Thus, while the creation of mechanisms for effective communication is not an ingredient specific to the CPS model, it is typically an extremely important focal point when the model is being implemented.

This treatment ingredient helps adults recognize that incompatibility episodes occur in the context of specific problems, and promotes the understanding that, if a problem can be solved, it will not precipitate challenging behavior any longer. Solved problems do not precipitate challenging behavior, only unsolved problems do.

3. *Begin using a collaborative approach to problem solving to address, in a realistic and mutually satisfactory manner, predictable, longstanding issues of conflict or disagreement so as to reduce the likelihood of incompatibility episodes and increase child–environment compatibility.* In most cases, this next phase involves working with children and their adult caretakers to solve the problems that are precipitating disadvantageous behavior. Adults are taught that the manner by which adults pursue unmet expectations and solve problems with a child is a major factor influencing the frequency and intensity of incompatibility episodes. Imposition of adult (in the parlance of CPS, this approach is referred to as "Plan A") is one way to pursue unmet expectations and solve problems, but is also the most common precipitant of acute (but highly predictable) incompatibility episodes. Removing an expectation (known as "Plan C") is effective at reducing tension between the child and the adult, but not effective at helping adults pursue unmet expectations. Collaborative Problem Solving ("Plan B") is an effective way to pursue expectations without increasing the likelihood of incompatibility episodes while simultaneously training and practicing emotion regulation, frustration tolerance, problem solving, flexibility, and a host of other lagging skills (in both interaction partners). The three Plans can serve as useful "shorthand" for helping adults communicate and think about how they are approaching problems. The ultimate goal, of course, is to help adults reduce their use of Plan A (thereby reducing incompatibility episodes), set priorities (this is where Plan C comes in), and dramatically increase their use of Plan B so that problems are resolved in a realistic, mutually satisfactory, durable manner. This combination of ingredients sets the stage for new interaction patterns in which adult caregivers are imposing their will a lot less, collaboratively solving problems a lot more, communicating more effectively, and fighting less.

The key to the creation of these new patterns is to help adults and children solve problems *proactively* rather than *emergently*. Adult caregivers (and many children) are surprised to learn that most of the problems precipitating incompatibility episodes are actually highly predictable and can therefore be discussed in a planned manner. The reality is that Emergency Plan B tends to be far less productive than Proactive Plan B, the former being more of a crisis management tool and the latter a crisis prevention mind-set. The primary disadvantage of emergent Plan B is heat (as in "the heat of the moment"), which makes solving problems far more challenging. Incompatibility episodes are merely a signal that there is a problem that has not yet been solved (proactively). Upon reflection, it is almost always the case that the problems causing incompatibility episodes were already highly predictable.

Plan B consists of three ingredients. The first, historically referred to as the "empathy step," involves having adult caregivers gather information from a child so as to achieve the clearest possible understanding of the child's concern or perspective on a given problem. The second ingredient, known as the "define-the problem" step, involves having the adult be highly specific about his or her concern or perspective on the same problem. There are now two concerns (but no solutions, yet) that have been entered into consideration. The third ingredient, called the "invitation", is where the adult and the child brainstorm solutions that will address the concerns of both parties.

Helping adult caregivers and the challenging children in their charge become proficient at these three ingredients is hard work. In outpatient work, an overview of the three ingredients is provided once the clinician has introduced the philosophical and theoretical underpinnings of the CPS model and a profile of lagging skills and unsolved problems has been established and priorities identified. Typically, treatment then continues with the clinician directly involved in the first few in-session Plan B discussions between parent(s) and child (focusing on items drawn from the list of unsolved problems), moves on with the parent(s) attempting Plan B in session, with guidance and feedback from the clinician, and continues with the parent(s) using Plan B outside of the clinical setting, with increasing independence and decreased reliance on the clinician for feedback. In schools and therapeutic facilities, it is equally important to begin with philosophical and theoretical underpinnings, but because the message is being delivered to many staff, unevenness in acceptance of the philosophy is to be expected. Thus, mechanisms must be in place to provide opportunities for staff to resolve philosophical differences and then to practice and receive feedback on their use of Plan B.

It is worth noting that the CPS approach differs from some other anger management and problem-solving training programs in its emphasis on helping adults and children develop the skills to resolve issues of disagreement *collaboratively*. I and others have argued that the equivocal effects of many interventions aimed at training cognitive skills to have likely been due, at least in part, to the manner in which such interventions were delivered (e.g., Greene & Barkley, 1996; Hinshaw, 1992). For example, in a majority of studies cognitive skills have been trained *outside* the settings where skills were actually to be performed. It has been suggested that training cognitive skills proximally to the setting(s) where, and the interactions partners with whom, new skills are to be performed might greatly enhance the maintenance and generalization of trained skills and would be more congruent with a transactional perspective (e.g., Greene & Doyle, 1999).

6.5   Basic Competencies of the Clinician

CPS is a process-oriented but directive form of psychosocial treatment drawing upon multiple lines of influence, including social learning theory, systems theory, and research in the neurosciences. Implementing CPS in an outpatient setting requires an array of skills, including: (a) the knowledge of the lagging skills setting the stage for challenging behavior; (b) the ability to transmit this knowledge to adult caregivers in a way that is persuasive but not dogmatic; (c) the ability to develop therapeutic alliances with adult caretakers and challenging kids so as to keep them engaged in the process (even when the going gets rough) and maintain a sense of realistic optimism; (d) the ability to empathize with each party about what they havee gone through and are going through (even when the child is not a willing participant in treatment)

and deal effectively with each party's misgivings and conceptions about this form of intervention; (e) the ability to take complex scenarios and reduce them to their basic ingredients: lagging skills and unsolved problems; (f) a capacity for neutrality, for it is not the role of the clinician to take sides or serve as judge and jury; (g) the ability to keep bringing participants back to the key themes of the intervention when they go astray, recognize when participants are having difficulty with key aspects of Plan B, and provide feedback and guidance on these aspects; (h) a sense of whether and when family members are able to converse directly with each other and the ability to prevent discussions from spinning out of control; (i) patience and persistence, because long-standing problems and conflictual patterns of interaction tend not to resolve quickly; (j) flexibility and creativity, because kids with conduct problems and their adult caretakers have been bumping up against inflexible systems for a very long time and have problems that often are not readily resolved through conventional solutions; and (k) energy, an "activist" mentality, and an understanding of how systems work, because the participants may well need someone to advocate on their behalf in a society where Plan A is still quite popular, especially as it relates to challenging kids.

Let us consider a few of these skills in greater detail, beginning with one aspect of item "d" (dealing effectively with misgiving and conceptions about the CPS model). It is quite common for adult caregivers – who have historically been relying heavily on consequences, have had only two options in their repertoires (Plan A and Plan C), and have therefore been engaged in the practice of "battle picking" – to conclude that Plan B is the equivalent of giving in, to feel that they are relinquishing authority by using Plan B, and to believe that the CPS model involves dropping all adult expectations. The competent CPS clinician takes the time to inquire about these concerns and is skilled at helping caregivers talk about and move beyond them. Adults are pursuing expectations and "setting limits" with both Plan A and Plan B, and Plan B has significantly greater upside (and significantly less downside) than Plan A.

Let us think about item "f" (a capacity for neutrality) as well. As I have written elsewhere, this is one of the most important facets of the CPS model:

▶ There is a temptation, in almost any form of therapy, to ally oneself with the "offended party." Moreover, parents and children often come into therapy with the expectation that the therapist will be the arbiter of right and wrong. It is no accident that people have this mind-set, for (unfortunately) we live in an era where "winning" versus "losing" and rigid definitions of "right" versus "wrong" pervade many issues facing our society. Thus, when working with and their adult caretakers, the temptation can break in either direction, such that therapists can find themselves agreeing with the child when they feel that the adults are being unreasonable and agreeing with the adults when they feel that the child is being unreasonable.

▶ In the CPS model, there are much more productive ways to insert oneself into a system than by taking sides. Indeed, it is actually counterproductive for the therapist to take sides. In succumbing to temptation, the therapist assumes the role of power broker. This is not an ideal role. If the therapist is busy meting out justice, when precisely do the parties learn to work things out with each other?

▶ Indeed, the CPS model requires *finely honed neutrality* on the part of the therapist. The role of the therapist is to accurately represent both sides and to ensure that both concerns make it into the discussion. *The best protection against taking sides is remaining focused on understanding and clarifying each person's concerns* (Greene & Ablon, 2006).

The competent CPS clinician adopts the stance that the concerns of both parties are legitimate and need to be addressed for a problem to be durably solved. Adults often find the clinician's neutrality to be a bit disarming, as they may be accustomed to therapies (or general child-rearing trends in society) in which the goal is to give children the incentive to satisfy adult concerns. The adults are reassured that their concerns are legitimate and will be addressed through the process of collaboratively resolving problems. Kids tend to be receptive to finally having their concerns heard and legitimized, but have often had little practice at generating alternative solutions and contemplating the degree to which the solutions are mutually satisfactory. The clinician helps the child appreciate the legitimacy of the adult concerns (or at least take the adult concerns into account). The ultimate goal is to help kids and adults work toward mutually satisfactory solutions, and it is the child and the adults, rather than the therapist, who determine whether a proposed solution is indeed "mutually satisfactory." A recurring point of emphasis along these lines is to help participants clearly distinguish between *concerns* and *solutions.*

Finally, a little more on item "g" (the ability to keep bringing participants back to the key themes of the intervention when they go astray, recognize when participants are having difficulty with key aspects of Plan B, and provide feedback and guidance on these aspects). There are some fairly typical ways in which participants struggle with the ingredients of Plan B. Adults tend to have an affinity for the *emergent* form Plan B, even if the clinician has expounded on the significant advantages of a more proactive approach to solving problems. The competent CPS clinician reminds participants that most unsolved problems are highly predictable, brings participants back to the list of unsolved problems generated early in treatment, provides opportunities (in sessions) for practicing Proactive Plan B, and monitors the continued effectiveness of solutions upon which they have agreed.

Adults also have a tendency to rush through the empathy step (a pattern I have referred to as "perfunctory empathy") and often lack the ability to "drill" for greater specificity regarding a child's concerns. Adults often fear that they are on the verge of capitulating if they should demonstrate a willingness to consider a child's concerns (another misconception that would need to be addressed) or simply are not sure what to say in an effort to seek additional information. It is also quite common for adults to insert solutions (rather than concerns) into the define-the-problem step. This is often because adults are not exactly certain what their concerns are (this is often contrasted by their certainty over how a particular problem should be solved). The competent CPS clinician takes the time to help adults clarify their concerns. And many people new to Plan B struggle with the Invitation step because they have simply had very little practice at considering solutions that would address not only their own concerns but those of another person. The competent CPS clinician provides opportunities for such practice and, early on at least, potential ideas for realistic and mutually satisfactory solutions. Solutions that do not stand the test of time typically are not as realistic and mutually satisfactory as the interaction partners originally thought they were. And, in a majority of instances, the first solution seldom solves the problem durably; successful problem solving is an incremental process. The competent CPS clinician helps participants return to Plan B and formulate new solutions based on information gleaned from solutions that did not stand the test of time.

Implementation of CPS in schools and therapeutic facilities requires some additional skills, including: (a) knowledge of the politics of larger systems, an awareness of the need to understand the politics and hierarchy within each individual system prior to beginning training in CPS, and strategies for helping large systems bring people on board and deal effectively

with the "politics of change"; (b) knowledge of the difficulties in communication inherent in large systems and of ways to help such systems establish optimal mechanisms for communication; and (c) recognition that things are likely to get worse before they get better.

Moreover, in such facilities, the individuals with whom (or situations in which) a child typically has difficulty in the outside world may not be readily accessible. This does not mean that Plan B cannot occur, but simply that staff may have to serve as the mouthpiece for those individuals. Fortunately, interactions and problems in restrictive facilities often imitate real life; the skills the children were lacking and problems they are having in the facility are the same as those that they were having in the "real world" (and that prompted their placement), so solving problems and teaching skills in the facility is not a pretense, it is the real deal.

CPS is not a passive model of intervention. Pre-existing belief systems and practices do not disappear quickly or easily. Adults have legitimate concerns about whether they will still be in control, whether they (and perhaps the children) will be safe, and whether chaos will ensue when one is implementing the CPS model. Fortunately, data from the studies cited earlier suggest that parents feel significantly more competent, set limits more effectively, and feel significantly better about their relationship with their child after CPS treatment. Conduct problems are significantly reduced in response to CPS; and, in restrictive facilities, use of chemical, physical, mechanical restraint and locked-door seclusion are significantly reduced (along with staff and patient injuries) when CPS is implemented.

Finally, the competent CPS clinician has an awareness of the potential benefits of pharmacologic intervention and of the factors such intervention can be effective in addressing. The target of medical intervention typically is not conduct problems or aggression per se, but rather the underlying or co-occurring factors – such as hyperactivity, poor impulse control, irritability, or emotional over-reactivity – with the intent of reducing oppositionality and aggression as associated symptoms (Connor & Steingard, 1996).

6.6   Expert Competencies of the Clinician

The primary factors setting the stage for expert status in CPS in a clinician are largely the same ones that set the stage for skilled application of the model in non-clinicians or with practically any other model: experience and supervised practice.

My experience is that many clinicians (and non-clinicians), on first learning about the CPS model, come to the fairly rapid conclusion that they are "already doing this" or that implementation will be fairly straightforward. As for the former, there is no question that CPS incorporates clinical ingredients that overlap with other models of care: empathy, relationship-building, talking, listening, clinical expertise, and so forth. However, as regards the latter, clinicians new to the model do tend to find it challenging in some characteristic ways: (a) maintaining neutrality while simultaneously protecting and strengthening therapeutic alliances; (b) being directive while simultaneously allowing the process of problem solving to unfold in individual cases; (c) spending too much time talking about the model in sessions and not enough time helping people practice; and (d) being enthusiastic about the model and eager for rapid acceptance and implementation while simultaneously appreciating that everyone has their own pace of change. It is also typical for clinicians new to the model to get pulled into dealing with the "hot" problem a family presents each week (rather than keeping track of unsolved problems and monitoring the degree to which they are durably

solved), to focus primarily on Emergency Plan B (rather than Proactive Plan B), to struggle with kids who "won't talk," to become frustrated with parents and staff members who "just don't get it," to pontificate rather than clarify and validate concerns, or to become overwhelmed by the complexity of certain problems and personalities. Hearing or reading about these challenges is quite different than experiencing them first-hand. Let us consider a few of the above patterns in greater detail.

Among the many experiences that would move clinicians toward expert status is working with families in which it is clear that a child and an adult are not yet able to exchange ideas without a dramatic rise in hostilities. Under such circumstances, an important role for the therapist is that of mediator or conduit between the two parties, at least until the factions are better able to tolerate direct interactions:

▶ The therapist explores possible solutions to conflicts between the two parties without the parties interacting directly with each other. Although this circumstance does not provide child and adult with any practice at directly talking things through, it does set the stage for some early successes with Plan B. Even when direct discussions are possible, the therapist is keeping a watchful eye on each family member's capacity for remaining engaged without becoming emotionally overloaded and remaining sensitive to moments when one family member or another may need a break from the conversation …(when) there is the potential for all hell to break loose in the therapist's office, the therapist is taking decisive action to prevent discussions from deteriorating past the point of no return, sometimes by interrupting, sometimes by asking someone to leave the office temporarily. There is nothing to be gained by watching a family discussion degenerate to the point that family members are at their worst. The therapist can gather relevant information about the factors setting the stage for deterioration well before the family hits the proverbial "brick wall" (Greene & Ablon, 2006).

Another essential experience is working with children who are having difficulty communicating their concerns; in other words, those who respond to inquiries about their concerns with either "I don't know" or silence. The task for the clinician is to figure out what kind of "I don't know" or silence it is. It turns out that silence and "I don't know" could mean many different things. Some children simply do not have the communication skills to articulate their concerns (intervention would involve creating mechanisms for these skills to be trained). Some children have already forgotten the question (this is often evident from their facial expression). Some children really do not know what their concerns are, perhaps because they have never been asked (and therefore have never given the matter any thought). Plan B gives children the opportunity to give the matter some thought. Along these lines, some clinicians need to get comfortable with silence. For some clinicians, even some seasoned ones, silence is uncomfortable, and there is the strong temptation to fill the void with the sound of one's own voice. Resisting this temptation not only facilitates the gathering of information, it also provides a crucial model for adult caregivers. If time to think does not accomplish the mission, the clinician would have an opportunity to model something else: hypothesis-testing and educated guessing. For some children, "I don't know" or silence can be a sign that they do not yet trust the process, or the clinician, or that they fear there will be "hell to pay" when the session ends. Educated guessing would be helpful here as well; then, ways in which these concerns could be addressed can take place.

Finally – well, not really finally, but our last example – in some families, as well as in schools and other facilities, there are adults who dominate conversations, shoot down ideas, minimize

the input of others, and prevent the free flow of ideas. There are other adults who are more passive and submissive and serve as spectators as the process of change unfolds. Handling these and other personality/communication patterns in an empathic, respectful, nonjudgmental, effective manner is a significant challenge, and one that tends to come more easily with experience.

Of course, experience is useful only if one is learning from it, and this typically requires supervised practice. As a relatively new model, opportunities for supervised practice are, at present, fairly limited. However, the author is working diligently to increase opportunities for such practice. Alas, it is, as of this writing, an unsolved problem, but not for long.

6.7 Transition from Basic Competence to Expert

Having now read of the author's discomfort with diagnoses, then you probably will not be surprised to read that he is similarly uncomfortable with fixed designations such as "expert," preferring instead to think in terms of levels of proficiency and comfort. The CPS model continues to evolve; presumably, clinicians practicing CPS do as well. So there are no formal criteria designating "expert" status in CPS, nor, at least at this point, any formal certification process.

But, as with any new skill, with experience and supervised practice clinicians implementing CPS become more comfortable and instinctive and less "mechanical" in their application of the model. They are still thinking and reflecting, but they are thinking and reflecting less about the formal, technical aspects of the model and more about how to tailor the model to a specific child, family, staff member, setting, or situation. Clinicians proficient in the model feel confident in their ability to handle the various bumps in the road that can occur during implementation, while relishing situations that will require a somewhat different tack than has been applied previously.

Here is a potentially useful analogy. The author of this chapter is an average athlete who had no experience in snow skiing until about 15 years ago. His spouse is a good athlete and has been skiing since childhood. The author has received some direct instruction in skiing and some supervised practice. He has gone skiing dozens of times in the past 15 years. Yet, when he is out on the slopes, he tends to stay on the easier trails and, if he does not think fairly continuously about what he is doing, has an outstanding likelihood of an embarrassing display. His spouse – who was interviewed for purposes of this chapter – thinks primarily about how much fun she is having when she is skiing; she tends to look at what is ahead only when she is skiing mogul courses and, even then, is in little danger of self-embarrassment or injury.

Transactional thinking is relevant here as well: a major determinant of treatment outcome is the degree to which intervention ingredients are well-matched to the needs and characteristics of individuals, or what could be referred to as "person–treatment compatibility". While the CPS model is comprised of some specific ingredients, how it is presented and explained should differ depending on the specific needs of the individuals with whom a clinician is working.

Indeed, as I think on the matter, proficiency and comfort are constructs that tend to be model-specific. A different construct – *effectiveness* – is perhaps of greater importance. Effectiveness refers to the degree to which a clinician is actually improving lives, and presumably includes person variables that are not always trainable through experience and supervised practice. For example, there is an excellent chance that, no matter how much instruction and supervised practice the author receives in skiing, he may still never be highly skilled in the activity and at this point, he is attributing this unwelcome reality to advancing age.

6.8   Summary

Children and adolescents with conduct problems represent an enormous challenge, not only clinically but also societally. Their difficulties are best understood not through "main effects," but rather through models of development emphasizing factors associated with the child and environment and their transactional influences. In this chapter, conduct problems were conceived as the byproduct of significant incompatibility between child and environment, or what was referred to as "child–environment incompatibility." The goal of assessment is to understand these incompatibilities; the goal of intervention is to address them.

Numerous models of psychosocial treatment have been applied to conduct problems. The fact that conduct problems remain a significant public health issue suggests that greater innovation in thinking and intervention are needed. The primary focus of this article was a model called Collaborative Problem Solving, an innovative, "hybrid" psychosocial treatment. In many families, schools, and treatment facilities, this evidence-based model represents a significant departure from the traditional models of care. The CPS model combines elements of social learning theory, systems theory, and research in the neurosciences, and its effectiveness has been examined in families, schools, inpatient psychiatry units, residential facilities, and juvenile detention facilities. CPS is a challenging model to implement, and the effectiveness of a clinician in doing so hinges on experience and supervised practice.

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7 Attention Deficit Hyperactivity Disorder

Arthur D. Anastopoulos · Lisa M. DeGrass

"Once he learned how to walk, all hell broke loose"
"I heard about the terrible twos, but my son is 10 now, when is he going to grow out of them?"

Abstract: This chapter addresses competencies that are important for clinicians to have in order to work effectively and ethically with child and adolescent AD/HD populations. As background, this chapter begins with a brief review of the primary symptoms of AD/HD, its associated features, and the factors thought to cause and/or maintain AD/HD across the lifespan. Next, evidence-based treatment approaches and the conceptual mechanisms by which therapeutic change presumably occurs are discussed. Against this background, competencies for beginning clinicians, as well as competencies for more advanced clinicians, are presented. Distinctions between beginning and expert clinicians are made along several dimensions, including: clinician knowledge of AD/HD as a disorder; the degree to which clinicians adhere to field-accepted criteria for AD/HD; clinician selection and use of assessment procedures; the manner in which the developmental deviance of AD/HD symptoms is addressed; the attentiveness of clinicians to comorbidity and diversity issues; clinician awareness of the fact that they are likely to be treating problems presented not only by the child with AD/HD but also his or her family; clinician recognition of and commitment to a multimodal treatment approach. The path from being a clinician with basic competencies to one with more advanced competencies requires not only experience but also an ongoing commitment to excellence and self-improvement, which serves as motivation for seeking out new and better ways of conducting assessments and providing treatment services.

7.1 Overview

At some point in their careers, most child health care professionals hear comments like these, uttered by parents who are frustrated by their inability to control their child's behavior. Although there are many possible explanations for viewing a child or adolescent who behaves in this way, such statements often come from parents whose children display features of attention-deficit/hyperactivity disorder (AD/HD; American Psychiatric Association, 1994). Some parents do not know a great deal about the disorder and, therefore, are not inclined to attach such a label. Nevertheless, they know that something is wrong, or at the very least "different," about their child. They might then turn to pediatricians, psychologists, psychiatrists, school counselors, or other health care professionals for further insight and guidance. They might also take the matter into their own hands, searching the Internet for clues about what is wrong with their child and for advice about how to bring about improvements in their child's behavior. Unfortunately,

the guidance that they receive about evaluation and treatment services for AD/HD can vary tremendously from one source to the next.

Why do so many variabilities exist in the assessment and treatment of AD/HD? Some of these variabilities stem from differences in professional training. But knowing whether a person holds an M.D., Ph.D., Psy.D., Ed.D., or M.S.W. tells little about the type of evaluation or treatment a particular health care professional is likely to employ. One's beliefs about the causes of psychopathology in general, and of AD/HD in particular, exert an even stronger influence on his or her approach to the assessment and treatment process. So too does one's level of experience in working with children and adolescents who have AD/HD. Although less obvious, another important element is the degree to which clinicians incorporate methodological rigor into their clinical practice – that is, the degree to which they use evidence-based assessment and treatment approaches. Further complicating matters is that the field is now saturated with a large number and variety of assessment procedures that purportedly measure AD/HD symptomatology, as well as a myriad of intervention approaches for treating AD/HD. Thus, for many health care professionals, deciding which assessment procedures and treatment strategies to employ can be rather confusing, not to mention, overwhelming at times.

So how does one sort through the confusion? In keeping with the theme of this handbook, this chapter addresses the competencies that are important for clinicians to have in order to work effectively and ethically with AD/HD populations. As background for understanding these competencies, this chapter begins with a brief review of the primary symptoms of AD/HD and its associated features. This is followed by a description of the factors thought to cause and/or maintain AD/HD across the life span, after which evidence-based treatment approaches are reviewed. Our current understanding of the conceptual mechanisms by which therapeutic change occurs is then discussed. Against this background, competencies for beginning clinicians, as well as for more advanced clinicians, are presented.

Before proceeding, two caveats are in order. First, while it is recognized that AD/HD affects individuals of all ages, a complete and thorough discussion of competencies across the life span is beyond the scope of this chapter. Thus, for the purposes of this volume, this chapter discusses competencies as they pertain to the clinical management of children. Second, readers need to keep in mind that the competencies outlined in this chapter are not necessarily universally held by all those who deal with AD/HD populations. Some might agree, and some might disagree with what has been proposed. The acceptance or accuracy of these competencies is not what is important here. What is relevant – given that systematic discussion of competencies for assessing and treating AD/HD has not been well addressed in the literature – is that this chapter puts forth a perspective that represents a starting point for discussing what these competencies might eventually be.

7.2 Recognition of Symptoms and Their Assessment

Most health care professionals would agree that developmentally inappropriate levels of inattention, impulsivity, and hyperactivity are the primary symptoms of AD/HD. Despite this consensus, professionals and lay individuals alike are sometimes unclear about what constitutes an AD/HD diagnosis. Some of these uncertainties arise in part from confusion over what is a primary AD/HD feature versus an associated feature of this disorder. For example, while noncompliance and low self-esteem are often associated with AD/HD, neither is a defining feature.

For this reason, clinicians must be thoroughly familiar with items that the field recognizes as primary AD/HD features, as well as those that constitute other disorders. Such symptom descriptions for diagnosing AD/HD appear in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV; American Psychiatric Association, 1994).

As defined by DSM-IV, inattention symptoms include the following: failing to give close attention to details or making careless mistakes, difficulty in sustaining attention to task, not listening when spoken directly, not following through on instructions and failing to finish assigned tasks, organizational difficulties, avoiding tasks that require sustained mental effort, often losing things, distractibility, and forgetfulness. Impulsivity may be expressed in terms of blurting out answers to questions before they have been completed, difficulties awaiting one's turn, and often interrupting or intruding on others. Examples of hyperactivity include fidgeting, leaving one's seat when remaining seated is expected, running about or climbing excessively, difficulty in playing quietly, appearing on the go or driven by a motor, and talking excessively.

On the basis of factor analytic results, DSM-IV presents these three primary symptoms in the context of two symptom lists, each of which comprises a total of either nine inattention symptoms or nine symptoms of hyperactivity-impulsivity. Six or more symptoms from at least one list must be occurring frequently and be developmentally inappropriate in order to meet the first of five DSM-IV criteria for establishing an AD/HD diagnosis. The other DSM-IV criteria include: having onset of these symptoms before 7 years of age, displaying some impairment from these symptoms in two or more settings, showing clear evidence of clinically significant impairment in daily functioning, and documenting that these symptoms are not better explained by another condition. Assuming all five DSM-IV criteria are met, an AD/HD diagnosis may be established according to one of three major subtype classifications. If an individual displays six or more inattention symptoms, six or more hyperactive-impulsive symptoms, and all other criteria are met, a classification of AD/HD, Combined Type is established. If six or more symptoms of inattention are present, less than six symptoms of hyperactivity-impulsivity occur, and all other criteria are met, a diagnosis of AD/HD, Predominantly Inattentive Type is appropriate. Conversely, if less than six symptoms of inattention are present, six or more symptoms of hyperactivity-impulsivity occur, and the rest of criteria are met, a classification of AD/HD, Predominantly Hyperactive-Impulsive Type is in order. In clinical practice, most children present with a Combined Type classification, followed in frequency by the Predominantly Inattentive Type classification. The Predominantly Hyperactive-Impulsive Type classification is much less common, occurring most often among preschool age children.

Having AD/HD places individuals at risk for a multitude of psychosocial difficulties across the life span (Anastopoulos & Shelton, 2001). For example, preschoolers with AD/HD place enormous caretaking demands on their parents and frequently display aggressive behavior when interacting with siblings or peers. Difficulties acquiring academic readiness skills may be evident as well, but these tend to be of less clinical concern than the family or peer problems that preschoolers present. As children with AD/HD move into the elementary school years, academic problems take on increasing importance. Together with their ongoing family and peer relationship problems, such school-based difficulties set the stage for the development of low self-esteem and other emotional concerns. Similar problems persist into adolescence, but on a much more intense level. New problems may develop as well (e.g., traffic violations, experimentation with alcohol and drugs), stemming from the increased demands for independence, self-regulation, and self-control that teenagers with AD/HD face.

In addition to being affected by its primary symptoms, children and teens with AD/HD are at increased risk for having secondary or comorbid diagnoses (Jensen, Martin, & Cantwell, 1997). Oppositional defiant disorder is especially common early on, affecting approximately 40% of the preschoolers and elementary school-aged children who have AD/HD. As many as 20–30% of these children will eventually display secondary features of conduct disorder. When AD/HD is accompanied by either ODD or CD, there is also an increased risk for depression and anxiety disorders to be present, especially during adolescence (August, Realmuto, MacDonald, Nugent, & Crosby, 1996). Antisocial personality disorder, major depression, and substance abuse are just a few of the many comorbid problems that may be found among adults with AD/HD (Barkley, Murphy, & Fischer, 2008). In combination with AD/HD, such comorbid conditions increase the severity of an individual's overall psychosocial impairment, thereby making treatment of such individuals more challenging and their prognosis less favorable.

Whether alone or in combination with various comorbid conditions, AD/HD can also have a significant impact on the psychosocial functioning of parents and siblings (Barkley, 2006). Research has shown, for example, that parents of children with AD/HD very often become overly directive and negative in their parenting style. In addition to viewing themselves as less skilled and less knowledgeable in their parenting roles, they may also experience considerable stress in their parenting roles, especially when comorbid oppositional defiant features are present (Anastopoulos, Guevremont, Shelton, & DuPaul, 1992). Parental depression and marital discord may arise as well. Whether these parent and family complications result directly from the child's AD/HD is not entirely clear at present. Clinical experience would suggest that they probably do, at least in part, given the increased caretaking demands that children with AD/HD impose on their parents. These include more frequent displays of noncompliance, related to the child's difficulties in following through on parental instructions. In addition, parents of these children often find themselves involved in resolving various school, peer, and sibling difficulties, which occur throughout childhood and into adolescence as well.

7.3   Maintenance Factors of the Disorder

Several lines of evidence point toward biological factors being involved in the etiology of AD/HD. In particular, research has identified potential abnormalities in brain chemistry (e.g., dopamine deficiencies) and/or function (e.g., diminished blood flow, decreased glucose metabolism) in the prefrontal limbic area of the brain as being the source of AD/HD difficulties (Pliszka, McCracken, & Maas, 1996; Zametkin et al., 1993). Multiple pathways presumably lead to such abnormalities. Among these, genetic mechanisms (e.g., dopamine transporter and receptor gene abnormalities) and certain pregnancy complications (e.g., maternal smoking during pregnancy) likely account for the largest percentage of children who have AD/HD (Biederman et al., 1992; Milberger, Biederman, Faraone, Chen, & Jones, 1997). Some children may acquire AD/HD after birth due to head injury, elevated lead levels, and other neurobiological disturbances. Although helpful in increasing our understanding of how AD/HD arises, such neurobiological findings have yet to translate into the development of reliable and valid procedures for diagnosing AD/HD. Such knowledge has, however, provided a clearer

understanding of why certain evidence-based treatments – in particular, pharmacotherapy – are effective in ameliorating AD/HD symptoms.

Building on what is now known about the biology of AD/HD, recent neuropsychological theories have cast a new perspective on how these presumed biological deficits affect daily psychological functioning (Barkley, 1997a; Nigg, 2001). Common to all of these perspectives is an emphasis on impairment in the neurologically based behavioral inhibition system that sets the stage for impulsivity to occur via disruption of executive functioning. In particular, what seems to be happening is that the part of the brain that allows an individual to stop, delay, or inhibit is not functioning properly because it is underaroused or underactive. Such under-arousal or underactivity is presumably due to the aforementioned diminished availability of dopamine, decreased blood flow, etc. in that part of the brain. This deficit in one's capacity for behavioral inhibition exerts a direct impact on the individual's capacity for executive functioning, including working memory, emotion regulation, and verbal self-regulation functions, as well as a process called reconstitution. Impairment in these various forms of executive functioning is what then leads directly to the expression of AD/HD symptoms, thereby helping to explain the various disruptions in cognitive, behavioral, and social functioning found within AD/HD populations.

In addition to factors that may cause AD/HD symptoms, it is important to consider circumstances that may serve to maintain or exacerbate such symptoms. One such consideration, which is of tremendous clinical utility, is the situational variability of AD/HD symptoms. Contrary to what many believe, AD/HD is not an all-or-nothing phenomenon, either there are all the time or not at all. Research has consistently shown that AD/HD symptoms fluctuate significantly in response to situational demands (Zentall, 1985). These symptoms are much more likely to occur under repetitive, boring, or familiar situations versus novel or stimulating conditions. Symptoms are also much more likely to arise when feedback is dispensed infrequently or on a delayed basis. Presumably due to increased demands for self-regulation, group settings are also far more problematic for children with AD/HD than are one-on-one situations. Another determinant of situational variability is the amount of imposed structure, such that AD/HD symptoms are much more likely to arise when demands are made or rules are in place for behavior. Because children with AD/HD are highly sensitive to such changes in their environment, they often display inconsistency or variability in their performance on school work and chores, both in terms of their productivity and accuracy. Although all children display some variability in these areas, it is clear from clinical experience and research findings that children with AD/HD exhibit this to a much greater degree. Thus, instead of reflecting "laziness," the inconsistent performance of children with AD/HD represents yet another manifestation of their disorder. Put another way, it is not so much that children with AD/HD lack the ability to perform assigned home or school tasks; instead, it is their ability to perform these tasks *consistently* that is problematic. As such, it would seem most appropriate to think of AD/HD as a disorder of performance variability rather than inability.

As noted earlier, individuals with AD/HD frequently display secondary or comorbid diagnostic conditions, such as oppositional defiant disorder conduct disorder, depression, anxiety, or learning disabilities. The reasons why individuals with AD/HD are at increased risk for these conditions are not yet well understood. Thus, little can be said about the factors that serve to cause, maintain, or exacerbate these associated features within an AD/HD population.

7.4   Evidence-Based Treatment Approaches

In view of its chronicity, pervasiveness, and comorbidity, AD/HD is not a condition that lends itself to one-dimensional treatment approaches. To address all of the problems that children and adolescents with AD/HD so often present, clinicians must employ multiple treatment strategies in combination, each of which addresses a different aspect of the child's or adolescent's psychosocial difficulties. Among those treatments that have received adequate or, at the very least, preliminary empirical support are pharmacotherapy, parent training (PT) in contingency management methods, and classroom modifications. Despite such support, these interventions should not be viewed as curative of AD/HD. Instead, their value lies in their temporary reduction of AD/HD symptom levels and in their reduction of related behavioral or emotional difficulties. When such treatments are removed, AD/HD symptoms very often return to pretreatment levels of deviance. Thus, their effectiveness in improving prognosis presumably rests on their being maintained over long periods of time.

Among various evidence-based treatments available for AD/HD, pharmacotherapy is by far the one used most often and for which there is the most empirical support (Greenhill, Halperin, & Abikoff, 1999). Many different classes of medications have been used to treat AD/HD but stimulant medications are generally considered the first line of treatment for this disorder. Many stimulant medications are now available, falling into one of two categories – methylphenidate or amphetamine products. Within these two categories, stimulant medications may be further subclassified in terms of whether they are immediate or extended release in nature. Virtually, all stimulant medications begin working within 30 min of ingestion. Most immediate-release products begin to lose their effectiveness within 3–4 h. Extended-release medications can last anywhere from 6 up to 12 h. Within 24–48 h, traces of stimulant medication generally clear from the body. This helps to explain why stimulants do not need time to build up to a therapeutic level to begin working, and also why they may be stopped for a short period of time and then restarted without difficulty. Most stimulant medications are delivered orally, but a transdermal patch version has recently appeared on the market. The exact manner in which stimulants are delivered into the bloodstream is highly variable, with some medications being dispensed in bimodal bursts, mimicking twice-daily dosaging, while others release more gradually and evenly over the duration of their therapeutic effectiveness.

Perhaps the best known of the immediate-release methylphenidate products is Ritalin, which has been around for quite some time but is no longer used that widely any more. Concerta is the leading extended-release methylphenidate product on the market today. Other extended-release methylphenidate products include Ritalin LA, Focalin XR, Metadate, and Methylin, all of which are ingested orally, along with Daytrana, which is a transdermal patch. For quite some time Adderall XR was the most frequently prescribed extended-release amphetamine product. A recently developed, long-acting prodrug amphetamine product, Vyvanse, is now on the market and being used with increased frequency.

Generally speaking, decreased appetite and decreased need for sleep are the two most common side effects associated with stimulant medication use. Less often, individuals taking stimulants may experience headaches, stomachaches, irritability, and sometimes tics. Recent concerns have also emerged with respect to the impact that stimulants may have on heart rate and blood pressure, primarily among individuals with personal or family histories of cardiac problems.

For those who not respond positively to stimulant treatment, nonstimulant medications may be appropriate. Among these, Strattera (aka Atomoxetine) is by far the one most commonly used, presumably due to its effectiveness in improving attention via its capacity for increasing the availability of the neurotransmitter, norepinephrine. Other alternatives to stimulants include atypical antidepressants, such as Wellbutrin, and to lesser extent, tricyclic antidepressants, such as Imipramine. Antihypertensive medications, such as Clonidine and Guanfacine, have also shown some promise of being effective alternatives to managing AD/HD and its associated symptoms, especially aggression. Unlike stimulants, Strattera and these other nonstimulant medications require time to build up to therapeutic levels in the bloodstream and their half-lives are substantially longer. Moreover, they are not associated with significant appetite problems or sleep suppression side effects. In theory, therefore, they have the potential to provide 24/7 therapeutic coverage. However, evidence in support of this contention is generally lacking.

When used as a monotherapy, stimulant medications have been shown to be effective in up to 80–90% of the child and adolescent population and for a slightly lower percentage of adults (Greenhill et al., 1999). Stimulants work primarily by reducing the severity of AD/HD symptomatology, thereby setting the stage for improved performance in school, at home, and with peers. Such changes in daily functioning do not automatically occur as a result of taking stimulant medication, thereby creating the necessity for other treatments to be used in combination with medication.

Among these, parent training (PT) is certainly worthy of further consideration. Although many different versions of PT exist, most PT programs include training in the use of specialized contingency management techniques, such as positive reinforcement, response cost, and/or time-out strategies (Barkley, 1997b; Cunningham, 2006). Still others combine contingency management training with cognitive therapy strategies and AD/HD-counseling, aimed at increasing parental acceptance, knowledge, and understanding of AD/HD (Anastopoulos, Rhoads, & Farley, 2006). Most of these interventions utilize 8–12 weekly therapy sessions.

Several recent reviews have converged on the same conclusion that PT is an evidence-based approach for treating children with AD/HD (Chronis, Chacko, Fabiano, Wymbs, & Pelham, 2004; Pelham & Fabiano, 2008). Along with traditional group-based approaches, many well-designed case study reports have appeared in the recent literature, lending further support to the efficacy of PT interventions (Chronis et al., 2001). In addition to producing changes in child behavior, PT interventions have contributed to improvements in various aspects of parental and family functioning, including decreased parenting stress and increased parenting self-esteem (Anastopoulos, Shelton, DuPaul, & Guevremont, 1993; Sonuga-Barke, Daley, & Thompson, 2002). Following the lead of Pisterman et al. (Pisterman et al., 1992), many recently published studies have examined the impact of PT on preschoolers with AD/HD (Sonuga-Barke, Daley, & Thompson, 2002; Shelton et al., 2000), thereby emphasizing a more preventive approach.

Information about efficacy of PT also comes from studies in which this form of treatment was combined with other interventions, such as school-based modifications and social skills training (Shelton et al., 2000). Findings from the recently completed MTA study have further shown that the efficacy of psychosocial treatment depends in large part upon the type and context of the outcome being assessed (Jensen et al., 2001; Swanson et al., 2002). When using changes in primary AD/HD symptomatology as a yardstick for therapeutic change, the MTA study found that a rigorously controlled medication regimen was equal to or better than either

a psychosocial treatment package that included a PT component or the combination of medication and the PT-psychosocial treatment package. However, in subsequent analyses that utilized indices of functional impairment (e.g., family functioning) and other ecologically valid measures (e.g., consumer satisfaction) to assess outcome, the combination of medication and the PT-psychosocial treatment package produced therapeutic benefits above and beyond those from medication alone. Moreover, certain types of children with AD/HD, such as those with comorbid anxiety, also seemed to benefit more from the combination of medication and PT-psychosocial treatment versus medication alone.

Along with PT, school interventions are another evidence-based psychosocial approach that may be used in the treatment of children and adolescents with AD/HD (DuPaul & Stoner, 2003). There are many different ways to address AD/HD in the school setting, but most school-based treatments can be conceptualized as falling into one of two categories: antecedent-based strategies (Zentall, 1993) or consequence-based strategies (Pfiffner, Barkley, & DuPaul, 2006). Examples of the former include classroom environment changes (e.g., preferential seating, closed rather than open classrooms), academic task modifications (e.g., color highlighted instructions, shorter assignments, reminder cards taped to desks), computer-assisted instruction, and curriculum changes. Consequence-based strategies, emphasizing positive reinforcement/punishment, may be delivered via token economy systems, sticker charts, or strategic teacher attention. Such treatment programming typically involves only the student with AD/HD and one or more of his or her teachers, but it may extend to other students and to parents as well. Group-based contingency programming involving the entire class is an especially effective way to address the needs of the student with AD/HD without singling out or stigmatizing that student. Classwide peer tutoring is another example of how classmates may be brought into the process of assisting students with AD/HD in a very effective yet naturalistic way. Likewise, setting up a daily report card system that goes back and forth between the classroom and the child's home allows teachers and parents to communicate more regularly and to collaborate more effectively in promoting academic success and behavioral self-control in the classroom.

Much evidence exists in support of using many of the aforementioned school-based interventions for treating AD/HD (DuPaul & Stoner, 2003). As was the case for PT, additional support may be inferred from the results of the MTA study, whose psychosocial treatment component included not only PT, but also a school-based intervention piece. This school-based intervention was delivered in two primary contexts: a behavioral intervention in the classroom by a paraprofessional during the first 3 months of the school year, followed by teacher-administered classroom interventions for the remainder of the school year. When combined with medication, this school-based treatment produced outcomes that were above and beyond that of medication alone.

7.5 Mechanisms of Change Underlying Evidence-Based Interventions

As noted earlier, many experts in the field today view AD/HD as a condition characterized by neurologically based deficits in the process known as behavioral inhibition (Barkley, 1997a; Nigg, 2001). Given that these neurological deficits are thought to arise from genetic abnormalities, prenatal complications, and other biological factors, it is easier to understand why current

treatments do not cure or eliminate AD/HD symptoms and must remain in place in order to be effective. While accounting for this limitation, this same neurobiological–neuropsychological conceptualization also helps to explain some of the mechanisms by which the aforementioned evidence-based treatments presumably exert their therapeutic impact.

A consideration of stimulant medication is the best starting point for discussing this connection. To some, it would appear to be a contradiction to treat AD/HD, a condition characterized by hyperactivity and other self-regulatory deficits, with stimulant medication. After all, why would you want to stimulate someone who is already overstimulated? An answer often given to this question is that stimulant medication has a "paradoxical" effect on individuals with AD/HD. Although intuitively appealing at some level, there is no scientific evidence to support such a conceptualization and therefore nothing could be further from the truth. Instead, findings from both human and animal lines of research converge on the same conclusion, suggesting that stimulant medication does exactly what its name suggests it is supposed to do – that is, stimulate. But in this case, what is stimulated is not the individual's behavior but rather the behavioral inhibition areas of the individual's brain that are underactive, underaroused, and understimulated.

In particular, stimulant medications are thought to be responsible for increasing availability of dopamine and other neurotransmitters in the prefrontal limbic area, the primary locus of behavioral inhibition. With increased availability of these neurotransmitters, neurophysiological functioning (e.g., blood flow, glucose metabolism) in this region of the brain is enhanced, thereby increasing the arousal level of the behavioral inhibition system. As activity level of behavioral inhibition improves, and perhaps even normalizes, it becomes possible for the individual with AD/HD to inhibit behavior more effectively, leading to improvements in working memory and other executive functioning processes. With a greater capacity to delay before responding, to stop in the middle of an ongoing activity, and to block out interference, individuals with AD/HD are thus able to function more normally.

It is primarily in this way that stimulant medication brings primary AD/HD symptoms under better control. And to the extent that primary symptoms interfere less with an individual's functioning, this also helps to explain how stimulant medication can sometimes result in reduced levels of aggression and other features commonly associated with AD/HD. It is important to remember that stimulant medication sets the stage for learning and behavioral control to occur, but does not necessarily guarantee it. For improvements in academic, social, and family functioning to occur with greater certainty, other treatments (e.g., parent training, classroom modifications) often need to be combined with medication management in order to maximize therapeutic outcome.

Although not yet empirically validated, the aforementioned neuropsychological conceptualization of AD/HD (Barkley, 1997a, 1997b; Nigg, 2001) may also have bearing on understanding some of the mechanisms underlying the therapeutic changes brought about by parent training (PT). In particular, to the extent that deficits in behavioral inhibition and executive functioning are central to understanding this disorder, this suggests that children with AD/HD are not very adept at thinking through the consequences of their actions. Such a limitation arises because children with AD/HD are less proficient in their working memory skills, thereby limiting their capacity to reflect back on their learning experiences or to think ahead with respect to future consequences that may follow their behavior. This impaired capacity to regulate behavior relative to time and to anticipate future consequences is of particular relevance. To the extent that the child's awareness of the connection between his or her behavior and

the consequences that are likely to follow can be enhanced, AD/HD symptoms will be less evident, giving way to greater external control, as well as self-control, over behavior. It is in this way, therefore, that PT is thought to reduce the severity of primary AD/HD symptoms as has been reported in the literature.

In addition to facilitating reductions in the severity of primary AD/DH symptoms, PT interventions can lead to improvements in secondary externalizing symptoms, parenting stress levels, parent–child relations, and overall family functioning. To understand how these changes may come about, it is first necessary to consider findings from the field of developmental psychopathology that have implicated the possibility of a developmental pathway, leading from AD/HD to ODD and CD (Loeber, Keenan, Lahey, Green, & Thomas, 1993). If having AD/HD greatly increases the risk of developing ODD/ CD, then it would seem to be of utmost clinical importance to begin treatment as soon as possible to reduce this risk among children not yet affected by these comorbid conditions. Research of this sort has yet to be conducted. However, the fact that environmental factors (e.g., coercive parenting, parental psychopathology, family stress), more so than biological factors, are thought to be intimately involved in the etiology of both conditions (Patterson, 1982) provides some justification for speculating that PT may serve to reduce, or perhaps even prevent, the development of comorbid ODD and CD features among children with AD/HD.

Although not yet widely recognized, cognitive therapy strategies, which are sometimes embedded in PT programs, may be used to alter the way that parents and other family members view a child with AD/HD, as well as their own capacity to parent that child. Such changes may help parents to become more accepting and tolerant of their life circumstances, which presumably may account for some of the reductions in parenting stress levels that have been reported in the literature. Another factor that may contribute to reducing parenting stress may be inferred from a consideration of the fact that PT also serves to address problems that exist in the attachment security, or emotional bonding, between parent and child. Because PT interventions teach parents how to interact with children in more effective and more positive ways, this form of treatment may contribute to improvements in the emotional bonding between parent and child. This in turn would serve to reduce parenting stress and, more generally, to enhance the overall emotional climate within the family. Finally, family systems theory (Minuchin & Fishman, 1981) may provide an explanation for why PT often serves to improve overall family functioning. According to this viewpoint, having a child with AD/HD places the family at increased risk for disruptions in normal family relations. When such circumstances arise, family systems theory would predict that changes in the structure of the family need to occur to normalize family functioning. To this end, PT may strengthen the alliance between parents by teaching them common ways to parent the child with AD/HD. In doing so, both marital and overall family functioning may be enhanced.

Many of the therapeutic benefits resulting from consequence-based interventions in school settings can also be understood in terms of the same conceptual mechanisms underlying the PT effectiveness. For example, just as children with AD/HD are not very adept at thinking through the consequences of their actions at home, they likewise do not think through the consequences of their actions in school. As was true for PT, to the extent that consequence-based treatments can increase the child's awareness of the connection between his or her classroom behavior and the consequences that are likely to follow, AD/HD symptoms are likely to diminish, allowing for greater external control, as well as self-control, over behavior and classroom performance.

Complicating school-based management of AD/HD is that the demands for self-regulation in the classroom are far greater than that typically encountered at home. More specifically, classroom activities occur in a group format and the content of classroom tasks is often highly familiar, repetitive, and potentially boring. Together, such situational circumstances set the stage for AD/HD symptoms to occur. To the extent that these classroom conditions can be altered ahead of time, AD/HD symptoms are less likely to arise. It is in this way that antecedent-based interventions are thought to exert their therapeutic impact in the classroom.

7.6 Basic Competencies of the Clinician

Based upon the preceding discussion, it is now possible to discuss the kinds of clinical competencies that are necessary to evaluate and treat children with AD/HD. This section will begin with a description of basic competencies, after which more advanced or expert competencies will be discussed. Within each of these sections clinical competencies will initially be described in terms of their application to assessment issues, followed by treatment considerations.

In terms of assessment competencies, it is first necessary to make a distinction between a screening assessment and a comprehensive evaluation. For the purposes of screening AD/HD, very few competencies are required. Such a process might merely involve, for example, administering a child behavior rating scale and simply counting up the number of AD/HD symptoms that are present or absent. For purposes of this chapter, clinical competencies will be discussed exclusively in the context of a more comprehensive evaluation that not only evaluates AD/HD concerns, but also addresses features commonly associated with this disorder.

So what are the basic competencies that a clinician should have in order to evaluate AD/HD comprehensively? First and foremost, clinicians need to be aware that there are many different types of clinical and research criteria for diagnosing AD/HD. For example, in addition to the DSM-IV criteria, used primarily in North America, criteria for AD/HD type conditions may also be found in the International Classification of Diseases, Version 10 (ICD-10). Despite availability of these formal criteria, it is not uncommon to encounter clinicians who diagnose AD/HD based on their own idiosyncratic conceptualization of this disorder. This is by no means a minor point and needs to be carefully considered by beginning clinicians. To facilitate communication among practitioners and researchers, it is essential that a common language and common operational definition be used to describe AD/HD and other mental health conditions. Thus, while it can be argued that the DSM-IV is flawed and by no means a perfect system, it nevertheless provides a common operational definition of AD/HD for which there is far more empirical evidence than would be the case using idiosyncratic definitions of this disorder. Thus, the first basic assessment competency involves both an awareness of multiple ways to classify AD/HD and a commitment to use formal diagnostic criteria that are widely accepted within the field.

Another basic competency pertains to one's adherence to these criteria. As was noted previously in this chapter, listed within DSM-IV are five major criteria for arriving at an AD/HD diagnosis. All too often, clinicians may claim to have used DSM-IV criteria when in fact they only used portions of the DSM-IV criteria for making an AD/HD diagnosis. Perhaps the best example of this practice can be found among clinicians who simply count up the number of frequently occurring inattention/hyperactive-impulsive symptoms as a basis for establishing a diagnosis. Although this is certainly an important aspect of making an AD/HD

diagnosis, symptom frequency alone is insufficient for establishing this condition. Counting up the number of symptoms that may or may not be present simply establishes that there is a high level of these symptoms. It does not systematically address the many possible explanations for these elevated symptoms. For example, while high levels of inattention might be due to AD/HD, it is just as likely that they could be due to depression, anxiety, or the secondary effects of learning disabilities. Thus, it is very important for clinicians to address all five criteria for establishing an AD/HD diagnosis in order to ensure that it is AD/HD, and not other conditions, accounting for the observed symptom patterns.

Assuming that one is committed to using formal diagnostic criteria in their entirety, the next basic assessment competency involves the manner in which assessment procedures are selected. Several factors influence this decision-making process. First, as any student in training knows, assessment procedures need to be reliable and valid. Although this may seem self-evident, all too often clinicians select assessment procedures based on their face validity, rather than more sound psychometric considerations. Lessons learned in the classroom about the reliability and validity of measurement devices must therefore be carried into clinical practice. Along with psychometric considerations, it is necessary to choose assessment procedures that yield data that can be mapped onto the DSM-IV criteria for AD/HD. Certain assessment procedures, such as psychological tests, do not yield symptom counts or address the cross-situational pervasiveness of AD/HD symptoms. More generally, there is currently no assessment procedure that addresses the DSM-IV criteria in their entirety. Thus, it becomes necessary to use multiple assessment procedures in combination in order to ensure that enough data are generated to allow for an accurate determination of whether the DSM-IV criteria for AD/HD have been met. Among the many procedures available for this purpose, structured and semi-structured clinical interviews come the closest to meeting this requirement. Child behavior rating scales do a reasonably good job of addressing the DSM-IV criteria, and many psychological tests yield data that have direct bearing on a final AD/HD diagnosis. The point to be made is that clinicians need to be aware of the fact that many assessment procedures are available for evaluating AD/HD and that some are better suited to this purpose than others.

The fact that AD/HD symptoms are subject to situational variability is another factor affecting assessment competence. This is by no means a minor point. The purpose of any psychological evaluation is to gather data that accurately reflect how a person is functioning in real life. Knowing that AD/HD symptoms can fluctuate as a function of changing situational demands, clinicians need to be keenly aware of the conditions under which they are gathering their assessment data. To the extent that conditions in the clinic, for example, are different from conditions in real life, there is an extremely high probability that evaluation data gathered in the clinic may not be a valid representation of what is truly going on in the child's daily life. Thus, clinicians need to be sensitive to this possibility in order to select assessment procedures that capture AD/HD symptoms in a more ecologically valid fashion.

Another important yet commonly overlooked aspect of evaluating children and adolescents referred for AD/HD concerns is that such individuals frequently present with diagnosable conditions above and beyond AD/HD. In fact, research has shown that up to 60% of the clinic referred AD/HD population carries with it one or more comorbid diagnoses. Therefore, an important basic competency for clinicians to have is being aware of this possibility and including assessment procedures to address this possibility.

Likewise, as noted earlier, parents and families of children with AD/HD frequently present with personal and relationship problems of their own. This may include, for example, parental

AD/HD, parental depression, high levels of parenting stress, and perhaps even marital difficulties. Such parent and family difficulties are by no means the cause of the child's AD/HD; they may, however, unintentionally exacerbate existing child difficulties or perhaps even interfere with parental efforts to implement recommended treatments strategies on behalf of their child. For this reason, another important competency for clinicians to have during the evaluation process is an awareness that children with AD/HD function within multiple systems, including the family system. Such systems can exert an influence over the course and severity of the child's AD/HD and/or comorbid features. Thus, clinicians need to be aware of the importance of addressing these parental and family issues as part of their overall evaluation of the child with AD/HD.

Once the assessment process is completed, clinicians may then shift their attention to planning, initiating, and implementing treatment. Ideally, such treatment planning flows smoothly and logically from the results of the completed comprehensive assessment. Knowing whether or not a child has AD/HD, what type of AD/HD, and whether or not comorbid conditions are present is minimally necessary for generating treatment recommendations. To the extent that parental and family difficulties have been identified as well, knowledge of these circumstances may lead to additional treatment recommendations. In short, a fundamental treatment competency is for clinicians to be aware of the fact that they are likely to be treating multiple problems presented not only by the child with AD/HD, but also his or her family.

Related to this competency is the fact that multiple treatment strategies will need to be used in combination to address these multiple problem areas. Thus, a second treatment competency is a recognition of and commitment to a multimodal treatment approach.

Although there is ample research support for multimodal treatment of AD/HD and its associated features, little empirical guidance is available to help clinicians decide which treatments should be used with which children and families under which conditions. In other words, there is no evidence-based formula for deciding how to tailor multimodal treatment to the needs of individual children and their families. To achieve this goal, it then becomes necessary for clinicians to conduct a thorough functional analysis of the child's problems. At a minimum, this would involve determining when and where the child's AD/HD difficulties are interfering with daily functioning. This same strategy, of course, can be used in regard to comorbid features. Conducting this type of functional assessment is extremely important to the overall success or failure of any treatment plan. To illustrate this point, consider for a moment child whose AD/HD symptoms primarily affect home functioning rather than school performance. Clinicians lacking these treatment competencies may mistakenly try to incorporate a one-size-fits-all approach involving the use of stimulant medication. After all, the reasoning goes, if the child has AD/HD and stimulant medication is an evidence-based treatment for AD/HD, then the child should be treated with stimulant medication. The problem with this simplistic approach is that the primary therapeutic benefits of stimulant medication occur during daytime hours when the child is in school rather than in the late afternoons and evenings when the child is at home. Under such conditions, the child in this example would be receiving an evidence-based treatment that would have little impact in the home setting where the child is experiencing most of his or her AD/HD problems. For reasons such as these, an important treatment competency for clinicians is to have the ability to determine the conditions under which evidence-based treatments can be employed most effectively.

As noted earlier, stimulant medication therapy is by far the treatment for which there is the most empirical evidence available to support its use in treating children and adolescents with AD/HD. Physicians, rather than psychologists and other nonmedical model health

professionals, are therefore the only professionals in a position to prescribe this form of treatment. To some, this may suggest that psychologists and other nonmedical professionals need not have knowledge of the various medications that can be used to treat AD/HD. Nothing could be further from the truth. Even though they cannot prescribe, psychologists and other nonmedical mental health professionals should have knowledge of these medications in order to understand how their own psychosocial treatments may be used in combination with pharmacotherapy.

As for implementing parent training and classroom modifications, it is important for clinicians to possess sound training in behavior theory and in applied behavior therapy techniques. Another important treatment competency for clinicians to have is familiarity with the assessment and treatment of oppositional defiant disorder and other childhood conditions that are often comorbid with AD/HD. To the extent that behavioral techniques are taught to parents on behalf of their child, clinicians also need to be tuned into adult psychopathology issues, as parental AD/HD and depression may interfere with efforts to implement recommended parent training strategies. And finally, because many parents ask lots of different questions about AD/HD, it is very important for clinicians to possess competence in their overall knowledge of this disorder and its associated features. This is especially important in order to dispel misconceptions about AD/HD that parents often encounter through their exposure to AD/HD information presented through various media outlets and on the Internet.

7.7 Expert Competencies of the Clinician

Adhering to the DSM-IV criteria for AD/HD in their entirety is an important assessment competence for beginning clinicians to have. More advanced or expert clinicians possess competencies that make for a smoother evaluation process and at the same time address some of the shortcomings in the DSM-IV criteria. For example, beginning clinicians might conduct an interview with a parent of a child suspected of having AD/HD by asking questions that address the criteria for AD/HD in the order in which they are presented in DSM-IV. Thus, the first thing that a beginning clinician might try to clarify is the number of inattention and/or hyperactive-impulsive symptoms that the child seems to be displaying. Next, the beginning clinician might ask about the onset of these symptoms, followed by a question concerning the different settings in which these symptoms occur. Continuing to adhere to the ordering of the DSM-IV criteria, the beginning clinician might then ask about functional impairment issues, etc. While gathering information in this way is technically correct, most advanced clinicians would find this ordering of questions somewhat awkward if not clinically illogical. So while remaining committed to addressing all five criteria for AD/HD, the more advanced or expert clinician might address these criteria in a different sequence or ordering. As would be the case for any other mental disorder, the most appropriate place to start this questioning is to ask about functional impairment. What is the child doing or not doing that causes concern for parents, teachers, or the child himself or herself? The more advanced or expert clinician would also seek to establish objective documentation of this functional impairment, rather than rely solely on subjective parental report. This might include use of school records, psychological test results, and so forth. Once the matter of functional impairment has been established, the advanced or expert clinician might then begin the process of determining whether or not AD/HD symptoms are present that might reasonably account for the impairment in daily

functioning. If so, the expert clinician would then seek to determine whether those symptoms rise to the level of AD/HD in terms of frequency and developmental deviance, as well as fitting the cross-situational, temporal, and exclusionary requirements for this diagnosis. Regardless of the exact order of questioning that is taken, the point to be made is that a more advanced or expert clinician would conduct questioning that addresses all of the DSM-IV criteria in a way that is more clinically meaningful. In so doing, the questioning becomes more comfortable for the parent being interviewed, resembling a conversation one might have in real life rather than a somewhat rigid, mechanistic discussion.

Another assessment competency that is often found among expert clinicians is the manner in which the developmental deviance of AD/HD symptoms is addressed. DSM-IV requires that such deviance be documented but provides no guidance as to how this may be accomplished. One way to do so is to incorporate assessment procedures for which norms are available to draw comparisons between the identified child and that child's age and gender-appropriate comparison group. Whether it involves parent and teacher completed child behavior rating scales or psychological tests, such normed assessment procedures provide the clinician with a relatively more objective determination of the degree to which the child's AD/HD symptoms deviate from what is expected developmentally. Using predetermined cut points (e.g., about the 93rd percentile), expert clinicians may then use evidence of statistical deviation to help them formulate a clinical decision as to whether the criteria for developmental deviance have been met.

Although considered excellent clinical practice, use of assessment procedures that allow for normed statistical comparisons are not without any problems. One commonly encountered shortcoming is the fact that most norms that are available for child behavior rating scales and psychological tests have been constructed using population samples in which minority groups are not well represented. In short, such assessment procedures may be culturally biased and therefore of questionable utility in working with children and families from culturally diverse backgrounds. Advanced or expert clinicians are aware of this possibility and take this into consideration when interpreting findings.

Yet another important distinction between beginning and more advanced clinicians may be seen in their capacity of identifying comorbid conditions. Commonly, beginning clinicians correctly identify AD/HD, but then mistakenly conclude that several other comorbid diagnoses are present. An example of one such combination of comorbid conditions might be oppositional defiant disorder, conduct disorder, separation anxiety disorder, generalized anxiety disorder, and social phobia. For both empirical and conceptual reasons, the likelihood of all of these comorbid conditions occurring along with AD/HD is quite low. Moreover, some of these diagnoses are subsumed by others, as would be the case for conduct disorder superseding oppositional defiant disorder. A more advanced or expert clinician would recognize this problem and aspire to finding a more parsimonious conceptualization of the child's diagnostic status, rather than accepting at face value that all such comorbid diagnoses exist. This diagnostic conceptualization might be simplified, for example, by emphasizing the presence of generalized anxiety disorder and assuming that this condition subsumes the other anxiety conditions. Advanced or expert clinicians also possess the competence that allows them to make sometimes difficult differential diagnoses between AD/HD and overlapping conditions such as bipolar disorder and central auditory processing disorder.

In terms of stimulant medication issues, expert clinicians not only possess the knowledge that allows them to understand how different medications work in conjunction with psychosocial treatment, but also the expertise that can assist prescribing physicians in assessing

the efficacy of their medication trials. Of particular relevance is the expert clinician's familiarity with assessment procedures that can be used in a cost-effective way to assess not only improvements in symptom presentation and performance, but also the possible presence of side effects. Working in collaboration with the prescribing physician, the expert clinician can coordinate dissemination and collection of parent and teacher completed rating scales distributed prior to the start of the medication trial, at the end of different titration periods, and at the completion of the trial. Similarly, the expert clinician may conduct pretrial and posttrial psychological testing using continuous performance tests and other indices sensitive to the effects of medication. Once such data are collected, the expert clinician can summarize and interpret the findings and then offer the prescribing physician an expert opinion as to whether or not there is evidence of a positive response to medication in the absence of significant side effects.

With regard to parent training interventions, advanced or expert clinicians are in an excellent position to supplement what is outlined in the manuals for these treatments. This might include, for example, systematically incorporating cognitive therapy strategies into the delivery of the behaviorally based parent training program. To the extent that expert clinicians can help restructure faulty parental cognitions about themselves or their children, it may then be possible to remove barriers that so often interfere with parental efforts to implement recommended treatment strategies. Perhaps the best example of this type of situation comes from parents who pessimistically state that "my child does nothing right" or that "nothing can help my child." By pointing out data that contradict these perceptions, advanced or expert clinicians can help parents restructure their beliefs about their children and themselves in ways that reduce distress and increase their motivation to comply with the treatment program.

The school setting provides advanced or expert clinicians with additional opportunities for providing helpful consultation that would otherwise be difficult for beginning clinicians to offer. Such expert clinicians would possess intimate knowledge of the rights of children with AD/HD within a particular school system and be thoroughly familiar with the types of regular classroom accommodations and exceptional child services that may be available. Armed with such knowledge, expert clinicians very often can serve to mediate differences of opinion between parents, who want to provide maximum school accommodations for their child, and school staff, who must find a way to balance the needs of individual children against the needs of other children served by the school. In a manner not dissimilar from that working with physicians, expert clinicians can also provide consultation to classroom teachers in setting up daily report card systems and other school contingency management programming, in ways that are tailored to the needs of a child with AD/HD. An example of how this might occur may be found with respect to setting up daily report card systems. In typical daily report card systems, children receive feedback about a particular behavior on one occasion at the end of the school day. Knowing that children with AD/HD function best when feedback is more immediate and more frequent, the expert clinician might suggest to the teacher that feedback about this same behavior be delivered every 30 min, thereby increasing both the immediacy and frequency of the feedback.

7.8 Transition from Basic Competence to Expert

As would be the case for most mental health disorders, the path that one takes from being a beginning clinician with basic competencies to a more advanced clinician with expert

competencies depends heavily on acquired experience. However, clinical experience alone is insufficient to ensure that this pathway leads to its intended goal. Many things need to accompany the experience that is acquired.

First and foremost among these is the clinician's need to maintain a life-long thirst for learning. Aspiring to excellence and adopting an attitude that there is always room for improvement can also serve to motivate a clinician to seek out new and better ways of conducting assessments and providing treatment services. This can be accomplished in part through ongoing reflection and self-assessment. Reading journal articles and book chapters on a regular basis makes it possible to keep up with the AD/HD research literature, from which new assessment ideas and treatment techniques can be put into clinical practice. Another useful way to keep up with changes in the AD/HD field is by attending clinical workshops on the topic. Here, however, is where one needs to keep in mind the admonition: "buyer beware." This is because the marketplace is saturated with individuals and companies offering half-day, full-day, and week-long training seminars on AD/HD. To ensure that they receive training that is up to date and evidence based, clinicians must take a critical look at the credentials of the presenter and then attend only those workshops conducted by reputable clinical researchers in the AD/HD field. Yet another way to improve one's competency level is through peer consultation and review. To the extent that a clinician has ongoing opportunities to discuss clinical matters with colleagues, the more likely it is that self-advancement can occur. For clinicians in academic settings, similar opportunities for self-improvement may arise indirectly from the clinical supervision that they provide to students working under their supervision.

For clinicians whose main vehicle for self-advancement is through the experience they garner in their clinical practice, one additional admonition is worth mentioning; that is, as clinicians begin to acquire clinical experience, there is an immediate and steep increase in their expertise, followed by what might be described as reaching a competency plateau. For many clinicians, reaching this plateau is a signal that expert competency has been achieved. And at times that may indeed be the case. More often than not, however, such a plateau is not really evidence of expert competency, instead a temporary leveling off of clinical skills that is a direct function of the limited number of cases that have been seen. Given the opportunity to see even greater numbers of cases, clinicians are likely to encounter yet another incline in their clinical competence, followed by yet another plateau. In this way, therefore, the path from basic to expert competence is not direct or linear. Instead, more often than not, it occurs in a stepwise fashion. Thus, only with significant increases in the number of cases that one sees can the opportunity for taking the next step be possible.

7.9   Summary

AD/HD is a chronic and pervasive condition characterized by developmentally inappropriate levels of inattention, impulsivity, and/or hyperactivity that cause significant impairment in multiple domains of daily functioning. Symptoms of AD/HD fluctuate as a function of changes in environmental demands and are often accompanied by co-occurring behavioral, emotional, social, family, and learning difficulties. Neurobiological and neuropsychological factors are thought to be involved in the etiology of AD/HD. These same factors help to explain, at least in part, the conceptual mechanisms by which evidence-based treatments for AD/HD presumably work. A great deal of variability exists in the way that various health care professionals provide

clinical services to this population. The source of such variability is not entirely clear but may stem from differences in clinical competency levels across professionals. To the extent that clinicians recognize this distinction and are receptive to the notion of self-improvement, there are many possible avenues by which they may increase their competence in providing both assessment and treatment services to AD/HD populations. Many of these competencies were enumerated in this chapter, but as was stated at the outset, in no way was this listing intended to be definitive or exhaustive. Many other competencies could be added to this list. Thus, for readers who have reached this point in the chapter, it is hoped that their interest has been piqued and that they have been stimulated to think more about clinical competencies as they apply to the clinical management of children with AD/HD.

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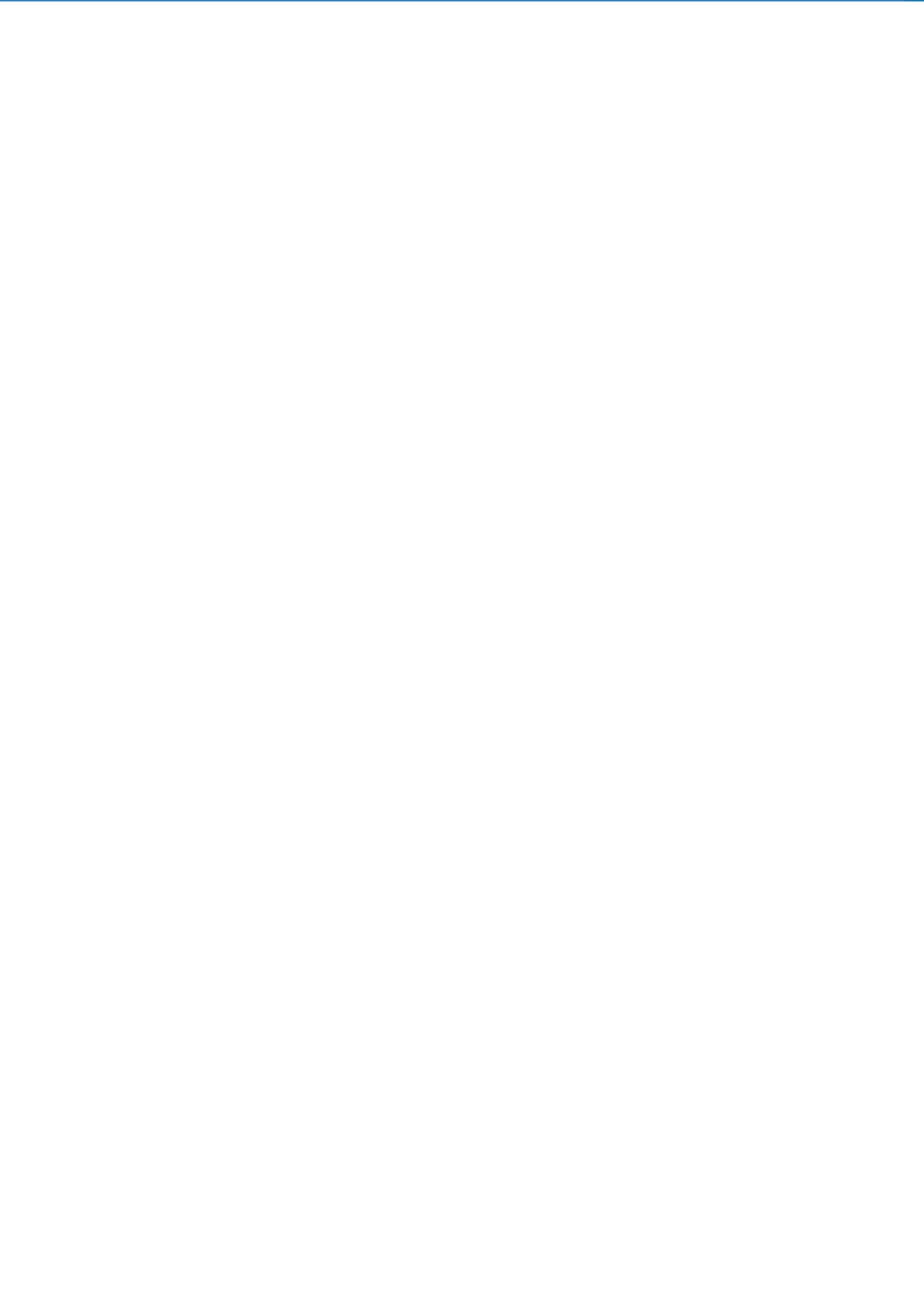
8 Enuresis and Encopresis

Patrick C. Friman · Kurt A. Freeman

Abstract: In this chapter, we describe the assessment and treatment of enuresis and encopresis. We first review literature on the symptoms, causes, and evidence-based treatments of each condition separately. We also incorporate a discussion of the mechanisms of change underlying effective intervention. Then, using Ryle's (1949) distinction between "knowing how" and "knowing that" as a framework, we discuss the basic competencies one should possess to address these clinical issues. A major reason for distinguishing between the "knowing how" and "knowing that" skill sets is that some clinicians teach and others practice. Based on this framework, we argue that demonstration of basic competency entails the clinician having the skills to conduct effective assessment and treatment of enuresis and/or encopresis, or the skills necessary to tell others (e.g., supervisees) how to do so. These skills include a thorough knowledge of the physiology of urination and defecation, potential pathophysiology of elimination disorders, the ability to effectively interface with medical providers regarding their treatment, and a strong working knowledge of evidence based treatments and their mechanisms of change. In our discussion of expert competency, we use no such distinction between "knowing how" and "knowing that", as an expert should be skilled in both. Further, expert competency in enuresis and encopresis entails the verbal and performance knowledge base to make scholarly contributions to the field, either by conducting one's own research or serving as a consultant to other research programs. Thus, an expert in this area is well poised to contribute to the field of elimination disorders as a master clinician, a specialty supervisor, and/or as a contributing researcher.

8.1 Overview

Child clinical and pediatric psychologists confront a diverse set of problems that challenge children and their families. Often overlooked, but critically important, is the ability to successfully evaluate and intervene the challenges that may, at first glance, seem either medically based or within the realm of "typical" child behavioral problems. Among the most common, persistent, and stressful presenting complaints in primary medical care for children are two disorders involving developmentally inappropriate elimination of waste – enuresis (urine) and encopresis (feces). Evidence of their commonality and persistence is found in prevalence and age-range estimates. Prevalence estimates range as high 2% of 5-year-old children for encopresis and 25% of 6-year-old children for enuresis and, although both are much less prevalent by the teenage years, they are not rare. For example, as many as 8% of boys and 4% of girls are still enuretic at the age of 12 (Byrd, Weitzman, Lanphear, & Auinger, 1996; Foxman, Valdez, & Brook, 1986; Friman & Jones, 2005; Friman, 1986, 1995, 2007, 2008; Gross & Dornbusch, 1983). Nocturnal enuresis (NE) and encopresis usually occur independently, but can co-occur.

While relatively common, elimination disorders are associated with a significant amount of stress. Evidence for their stress inducing properties for parents can be found in the relationship between elimination disorders and child abuse; incontinence is one of its leading causes

(Finn, 2005; Helfer & Kempe, 1976). Evidence is also found in surveys of child reported stress; incontinence is exceeded only by divorce and parental fights (Van Tijen, Messer, & Namdar, 1998). Thus, successful treatment of these disorders can have widespread benefits.

This chapter focuses on the evaluation and treatment of enuresis and encopresis. Although a biobehavioral conceptualization is appropriate for both the conditions, specific physiological and behavioral processes underlying these disorders differ markedly, as do interventions; thus, each disorder is discussed separately. Within the discussion of each disorder, the following issues are addressed: (a) recognition of symptoms and their assessment, (b) maintenance factors, and (c) evidence-based treatment approaches and the mechanisms of change underlying those interventions. Following the description of both the conditions, the knowledge and skill sets needed to establish basic and expert competency in elimination disorders are discussed, followed by the measures one should pursue for the successful transition from basic to expert competence.

8.2   Enuresis

8.2.1   Recognition of Symptoms and Their Assessment

8.2.1.1 Symptom Definitions

The current criteria for enuresis (nocturnal and diurnal) from the *Diagnostic and Statistical Manual, Fourth Edition, Text Revision* (DSM-IV-TR; American Psychiatric Association [APA], 2000) are (a) repeated urination in bed or clothing; (b) at least two occurrences per week for at least 3 months, or a sufficient number of occurrences to cause clinically significant distress; (c) chronological age of 5 years, or for children with developmental delays, a mental age of at least 5 years; and (d) not exclusively owing to the direct effects of a substance (e.g., diuretics) or a general medical condition (e.g., diabetes).

There are three subtypes of enuresis: nocturnal only, diurnal only, and mixed nocturnal and diurnal. There are two courses, primary and secondary. The primary course includes children who have never established continence, and the secondary course involves children who, after establishing continence, resume having accidents.

Even the most conservative research-based estimates show that enuresis is a very common problem, particularly NE. The National Health Examination Survey reported that as many as 25% of boys and 15% of girls were nocturnally enuretic at the age of 6, with as many as 8% of boys and 4% of girls still enuretic at age the of 12 (Gross & Dornbusch, 1983; see also Foxman et al., 1986). Prevalence studies from outside the United States indicate that at least 7% of all the 8-year-old children wet their beds with an approximate 2:1 ratio of boys over girls (Verhulst et al., 1985). Estimates of the percentage of cases of primary NE begin at 80–90% (Friman, 1986, 1995, 2007, 2008; Friman & Jones, 2005; Mellon & Houts, 1995).

8.2.1.2 Evaluation

The initial stage of an enuresis evaluation should include both specific inquiry regarding toileting habits and patterns, as well as general screening for broader child and family variables that

may be of direct or indirect importance. Once those tasks have been completed, a "go no further" maxim should be observed. That is, once the history has been obtained and preliminary psycho-educational information about enuresis has been shared with the parents and the child, the psychologist should go no further with direct treatment until a medical examination has been conducted. As indicated in the etiology section presented later, a number of pathophysiological variables can cause enuresis (see Section 8.2.2), and although these are rare, they may be a possibility and hence, must be ruled out medically before a primary treatment plan is implemented. This emphasis on initial medical examination should not be construed as undermining the role of the psychologist. The medical examination is but one of the numerous components necessary for effective management of enuresis, most of which could (and typically would) be implemented by the psychologist. Effective management involves direct and indirect components, and the medical examination merely precedes the direct components.

While considering the history, the psychologist should include questions derived from the earlier subsection on defining the characteristics (e.g., primary vs secondary) and regarding the etiological factors (e.g., family history of enuresis, disease history, mental health history, etc.) mentioned later. Furthermore, some screening for mental health problems should be included (e.g., behavior checklists, related inquiry). Mental health problems do not appear to have a direct forward causal relationship with enuresis (i.e., they are much more likely to be caused by enuresis than being the cause of enuresis; see Section 8.2.2.7). However, if the child presents with mental health problems, these should be addressed in the ultimate treatment plan.

Particularly, for primary enuresis, which is most often likely to present when children are younger, the evaluator must screen for readiness of the child to master toileting skills. Six areas of readiness should be assessed: (a) physical readiness (e.g., can pull up and down pants, pick up small objects, sit independently), (b) bladder readiness (e.g., dry for several hours), (c) language readiness (e.g., have learned "toileting words"), (d) instructional readiness (i.e., can follow at least one-step commands), (e) proprioceptive readiness (i.e., shows some signs of awareness of need, act, or outcome of urinating), and (f) emotional–social readiness. Generally, success with toilet training is indicated when all the six areas of readiness are intact. However, with regard to some populations (e.g., children with developmental delays), protocols have been developed to assist with toilet training even if all six areas are not intact (e.g., Azrin, 1973; Foxx & Azrin, 1973). Nevertheless, many of these protocols focus on establishing continence with the aid of care givers, rather than independent toilet. In contrast, the goal with typically developing children is to establish independence in toileting habits. Thus, for this population, attention to all of these areas is important.

In addition to addressing the medical and psychological complications, the initial evaluation and early management of enuresis should also address three other very important topics. First, the psychologist should probe all the aspects of the child's life to determine the sources of punishment for wetting, and take steps to neutralize them. This can be accomplished directly by warning the parents to refrain from punishment and indirectly, by educating them that the incontinence is beyond their child's immediate control. Second, the psychologist should assess the motivational level and availability of social resources of the parents. If the parent is minimally motivated and/or has few social resources (e.g., single working parent), then the number of treatment components that they would be able to implement may be limited. Third, the psychologist should assess the motivation of the child. As will be seen in the treatment section, optimal treatment plans involve multiple components and require compliance from the

child for accomplishing most steps. An unmotivated or noncompliant child would be difficult to treat with any method known to cure enuresis. Fortunately, enuresis itself usually contributes to the afflicted child's motivation. As the number of pleasant experiences missed (e.g., sleepovers, camp) and unpleasant experiences encountered (e.g., wetness, social detection, embarrassment) accumulate, motivation typically naturally increases.

8.2.2   Etiological and Maintenance Factors

8.2.2.1 Physiology of Urination

Enuresis (similar to encopresis) involves a composite of physiological and psychological factors, and thus, a full clinical understanding of how it is caused (and treated) requires at least a modest familiarity with its physiology. The bladder, an elastic hollow organ resembling an upside-down balloon with a long narrow neck, is the primary organ in a complex set of physiological systems that govern urination. It has two primary mechanical functions, storage and release of urine (Vincent, 1974). Extended storage and volitional release are the defining properties of urinary continence. The body of the bladder is composed of smooth muscle and its nerve supply is autonomic; thus, it cannot be directly controlled by volitional behaviors – it cannot be "willed" to contract or relax. Nonetheless, continence requires personal control over bladder contraction and relaxation.

Fortunately, there are components of the urogenital system (other than the bladder itself) that can allow such control. These involve three large muscle groups, the thoracic diaphragm, the lower abdominal musculature, and the pubococcygeus (anterior end of the levator ani; Muellner, 1960, 1961). Deliberate urination at all levels of bladder filling involves a coordination of these three groups, resulting in intra abdominal pressure directed to the bladder neck. This coordinated action lowers the bladder neck resulting in reflexive contractions of the bladder body, opening of the internal and external sphincters, and emptying of the bladder.

Urine retention generally involves a reversal of the process described earlier. That is, except during imminent or actual urination, pelvic floor muscles remain in a state of tonus or involuntary partial contraction that maintains the bladder neck in an elevated position and sphincter muscles closed (Vincent, 1974). Even after the initiation of urination, contraction of the pelvic floor muscles can abruptly raise the bladder neck and terminate urination; however, this requires some training and concentrated effort. Optimal bladder training requires detection of bladder filling and either urination in an appropriate location or retentive contraction of pelvic floor muscles (Friman, 1986, 1995, 2007, 2008; Friman & Jones, 2005; Mellon, Scott, Haynes, Schmidt, & Houts, 1997).

Thus, the voluntary components of the bladder system can be used to initiate the involuntary components to achieve urination or continence. Establishing nocturnal continence involves a sequence of continence skills, including awareness of urgency, initiating urination, inhibiting actual and impending urination while awake, and inhibiting actual and impending urination while asleep. Mastery of continence skills requires abundant practice, especially for enuretic children. Optimal bladder training requires detection of bladder filling and either urination in an appropriate location or retentive contraction of pelvic floor muscles (Friman, 1986, 1995, 2007, 2008; Friman & Jones, 2005; Mellon et al., 1997).

Enuresis has a variable clinical presentation, which makes the establishment of its precise etiology a difficult assignment. Not only are its initiating causes and maintaining factors variable and often different from child to child, they can actually differ within the same child at different points of time (Friman, 1986, 1995, 2007, 2008; Friman & Jones, 2005). The etiological variables that have received the most scientific investigation are family history, maturation, functional bladder capacity (FBC), sleep dynamics, physical pathology, psychopathology, and nocturnal polyuria.

8.2.2.2 Family History

Research on family history shows that the probability of enuresis increases as a function of closeness or the number of blood relations with a positive history (Kaffman & Elizur, 1977). It is possible that families convey tolerant attitudes toward bedwetting and not enuretic "genes." However, even in settings where family custom plays a minimal role in child development, there is a high correlation between family history and enuresis (Kaffman & Elizur).

8.2.2.3 Maturation

The possibility of a genetic connection suggests a biologic factor for enuresis, and one plausible candidate for which is maturational lag. For example, children with decreased developmental scores at the ages of 1 and 3 years are significantly more likely to be enuretic than those with higher scores (Fergusson, Horwood, & Sannon, 1986). There is also an inverse relationship between birth weight and enuresis at any age. Enuretic children tend to lag slightly behind their nonenuretic peers in Tanner sexual maturation scores, bone growth, and height (Gross & Dornbusch, 1983). The increased prevalence of enuresis in boys also suggests maturation lag, because boys generally have a slower rate of development than girls throughout childhood and adolescence. Finally, enuretic children exhibit a 15% annual spontaneous remission rate which is consistent with the notion that they are lagging behind in the acquisition of continence, a developmental milestone for all children (Forsythe & Redmond, 1974). Despite the apparent maturational lag in many (perhaps most) enuretic children, their scores on standardized intellectual tests are in the average range. Thus, the maturational lag appears more anatomical and/or physiological than intellectual, and its cardinal expression is delayed bladder control (Friman, 1986, 1995, 2007, 2008; Friman & Jones, 2005; Gross & Dornbusch, 1983).

8.2.2.4 Functional Bladder Capacity

The FBC refers to voiding capacity as distinguished from true bladder capacity (TBC) that refers to the bladder structure (Troup & Hodgson, 1971). The FBC is established in various ways, examples of which include the higher volume in either of the first two voidings after ingestion of a specified water load (e.g., 30 ml/kg body weight), the average of all voidings in 24 h, or the average of all voidings in 1 week. The FBC of enuretic children is generally lower than that of their nonenuretic siblings and peers, but their TBC is about the same. Overall, the research on FBC suggests many enuretic children urinate more frequently with lesser volume

than their nonenuretic peers and siblings. Their urinary pattern has been compared with that found in infants and very young children (Friman, 1986, 1995, 2007, 2008; Friman & Jones, 2005).

8.2.2.5 Sleep Dynamics

By definition, NE is a sleep problem. It is also regarded as parasomnia by most sleep researchers, as a manifestation of sleep disturbance by some sleep researchers, and as an outcome of deep sleep by most parents (Friman, 1986, 1995, 2007, 2008; Friman & Jones, 2005). Still, sleep dynamics have not been established as a cause of enuresis. Wetting episodes occur in all stages of nonrapid eye movement (NREM) sleep, and the probability of their occurrence appears to be a function of the amount of time spent in each stage. Enuretic episodes also rarely occur during REM sleep, therefore, thematically related dreams (e.g., dreaming of urinating) may be a result rather than a cause of wetting.

A final issue pertaining to sleep involves whether it is more difficult to wake up enuretic children than their nonenuretic peers. Generally, findings from most studies are mixed and marred by experimental limitations (e.g., sleep stages not established). A pertinent study with 15 enuretic boys and 18 controls addressed this problem by employing sleep EEGs and auditory tones delivered via earphones (Gellis, 1994). During 512 arousal attempts, the enuretic children awoke 8.5% of the time compared with 39.6% of the time for the controls. Thus, the common parental complaint about bed-wetting children who are difficult to awaken may have an empirical basis. However, the high percentage of the time that children in both the groups did not wake up suggests that being a "deep sleeper" is probably not the primary cause of NE.

8.2.2.6 Pathophysiology

There are numerous well-known potential physiopathological causes of enuresis. These include urinary tract infection, urinary tract anomaly, bladder instability, spina bifida occulta, tethered cord, epilepsy, diabetes mellitus, and sleep apnea. Most of these causes can be ruled out by complete history, physical exam, and urinalysis. When unanswered questions remain, other more elaborate laboratory examinations such as voiding cystourethrogram or polysomnographic evaluation are available (Gross & Dornbusch, 1983). Although these issues are rarely the cause of enuresis, their possibility underscores the importance of thorough medical evaluation before pursuing treatment.

8.2.2.7 Psychopathology

Although remnants of the once prominent (if not dominant) notion that enuresis is a function of underlying psychopathology remain, the majority appears to be that psychopathology is not a causal variable for primary enuresis. The extent of increased behavior problems in enuretic children, may probably be a result of than a cause of enuresis (e.g., Friman, Handwerk, Swearer, McGinnis, & Warzak, 1998; also see, Friman, 1986, 1995, 2007, 2008; Friman & Jones, 2005). Moreover, longitudinal research showing that maturational variables were predictive of

enuresis also showed that psychosocial variables such as emotional disposition were not predictive (Fergusson et al., 1986). A possible exception to the above mentioned observation involves increased emotional problems in children with secondary enuresis. As noted earlier in the physiology section, continence involves skilled practice, and necessary skills can be lost, regained, and lost again. Thus, secondary enuresis, by itself, does not indicate the presence of emotional problems, but major life stressors (e.g., loss of a parent, moving, academic failure) may result in various types of temporary skill loss, including continence skills (Friman; Friman & Jones).

8.2.2.8 Nocturnal Polyuria

The presence of antidiuretic hormone (ADH) or arginine vasopression causes the kidneys to increase the concentration of urine (by increasing the reabsorption of free water in the renal-collecting duct). Theoretically, serum ADH levels increase at night, and thus, protect sleep from urinary urgency and facilitate nocturnal continence. Research has shown that a subset of enuretic children do not exhibit the normal diurnal rhythm of ADH secretion and perhaps, wet their beds as a result of increased urine production while sleeping (e.g., Norgaard, Pedersen, & Djurhuss, 1985). Earlier (and subsequent) related research showed desmopressin (DDAVP), an intranasally administered vasopressin analogue, reduced nocturnal enuretic episodes in children (e.g., Dimson, 1977; and see *Antidiuretics* under Treatment below). However, whether the effectiveness of DDAVP is due to the restoration of insufficient nocturnal ADH or is merely the result of decreased urine volume (due to increased concentration) and thus, not a primary causal variable, is still unknown (Houts, 1991). In fact, evidence for decreased nocturnal ADH as a primary causal variable is still quite limited, for several reasons. The sample sizes in the related studies were small (e.g., Norgaard et al., 1985), less than one-quarter of treated bed-wetting children achieved short-term dryness (Moffatt, Harlos, Kirshen, & Burd, 1993), and not all children with known urine concentrating problems wetted the bed (e.g., only 50% of children with sickle cell anemia are enuretic). Lastly, lower ADH has not been linked in any empirical way to the question on why children do not wake up to full bladders, and not all people (children included) wake up to a full bladder or wet their bed because they do not awake. As indicated earlier, NE is determined based on multiple factors, and abnormality in nocturnal ADH secretion is nothing but one of the several possible causal contributors.

8.2.3 Evidence-Based Treatment Approaches

Treatments for NE predate modern civilization, and for hundreds of years, were focused on punitive and invasive strategies (e.g., penile binding, being forced to wear urine-soaked pajamas – Glicklich, 1951). The evolution of treatment for NE that began in earnest early in the twentieth century abandoned the physically harsh treatments in favor of approaches that were more humane from a physical perspective, but still problematic from a psychological one. Specifically, with the rise of Freudian psychodynamics, psychopathological characterizations of common childhood problems such as enuresis were identified (Friman, 2002). Although more protected from harsh physical treatment than their ancestral peers, early twentieth-century enuretic children were often subject to stigma, isolation, and other negative social consequences.

8.2.3.1 Behavioral Interventions and Their Mechanisms of Change

The advent of behavioral theory and the conditioning-type treatments derived from it, inaugurated a virtual paradigmatic shift in the treatment for enuresis. Specifically, behavioral theory rendered psychopathological interpretations obsolete and aversive physical treatments unnecessary (e.g., Christophersen & Friman, 2004; Friman, 1986, 1995, 2007, 2008; Friman & Jones, 2005). Instead, treatments focused on skills acquisition and conditioning paradigms.

Urine alarm devices. The cardinal conditioning-type treatment for NE has been the urine alarm and, if not the first, certainly the foremost early user of it was Herbert Mowrer (Mowrer & Mowrer, 1938). Since the mid 1970s, psychological research on medically uncomplicated NE in children has been dominated by either the development of alternative behavioral procedures based on operant conditioning or improving urine-alarm treatments (Houts, 2000; Mellon & McGrath, 2000).

The urine alarm uses a moisture-sensitive switching system that, when closed by the contact with urine seeped into the pajamas or bedding, completes a small voltage electrical circuit and activates a stimulus that is theoretically strong enough to cause waking (e.g., buzzer, bell, light, or vibrator). While various types of devices exist, all function in essentially the same way. Specifically, a pad is placed either inside the child's pajamas/underpants or under the sheets of the target enuretic child's bed. The pad typically involves two aluminum foil pads, one of which is perforated with a cloth pad between them. The perforated side is turned toward the child (small pad inside pajamas/underpants) or faces up under the sheets (bed device versions). A urinary accident results in urine seeping through perforations in the top pad, collecting in the cloth pad, and causing contact with the bottom sufficient to complete an electrical circuit and activate an alarm mechanism. Variations in the devices include systems whereby two wire leads connected to an alarm are attached to the child's pajamas/underpants, and the absorption of the urine by the pajamas completes the electrical circuit between the two wire leads and activates the alarm.

Regardless of the system, in principle, the intervention components are the same. Specifically, the awakened child turns off the alarm and completes a series of responsibility training steps associated with the accident, such as completing urination in the bathroom, changing pajamas and sheets, and returning to bed. In practice, the alarm often alerts parents first, who then wake up the child, and guide the child through the training steps (Friman, 1986, 1995, 2007, 2008; Friman & Jones, 2005).

Controlled evaluations of the urine alarm indicate that this relatively simple device is 65–75% effective, with a duration of treatment around 5–12 weeks, and a 6-month relapse rate of 15–30% (e.g., Butler, 2004; Doleys, 1977; Houts, Berman, & Abramson, 1994; Mellon & McGrath, 2000). Further, regarding youth who relapse after an initial course of treatment with the urine alarm, the vast majority respond successfully to additional trials of the intervention (Schmitt, 1984). Most of this research has been conducted using the bed device and, less frequently, the pajama device. Treatment involving the alarm used alone, or in strategic combinations with other treatment components, has been established as "effective treatments" according to the criteria established by the American Psychological Association (Mellon & McGrath). Thus, the urine alarm is a core treatment component that can be augmented by a range of other strategies.

The mechanism of action in alarm-based treatment was initially described as classical conditioning, with the alarm as the unconditioned stimulus, bladder distention as the conditioned

stimulus, and waking as the conditioned response (Mowrer & Mowrer, 1938). More recent literature emphasizes a negative reinforcement or avoidance paradigm (Friman, 1986, 1995, 2007, 2008; Friman & Jones, 2005; Ruckstuhl & Friman, 2003), in which the child increases the sensory awareness to urinary need, and exercises anatomical responses (e.g., contraction of the pelvic floor muscles) that effectively avoid setting off the alarm (Mellon et al., 1997). However, cures are obtained slowly, and during the first few weeks of alarm use, the child often awakens only after voiding completely. Nevertheless, the aversive properties of the alarm inexorably strengthen those responses necessary to avoid it.

Other behavioral interventions. A variety of other behavioral interventions have been described in the literature, none of which appear to be as effective as the urine alarm. However, their combination with urine alarms can be advantageous, and their use may be preferred by some youth despite decreased likelihood of effectiveness (Freeman, 2004).

Retention control training (RCT) has received some attention in the empirical literature as a method of addressing NE. While several variations in specific aspects of RCT have been described in the literature (for review, see Freeman & Dexter, 2002), all the reported protocols generally involve daytime instructions to the enuretic child to delay micturition from the time that he or she first senses the urge to urinate. In this manner, the child learns to increase the amount of urine that can be held in the bladder prior to urination, thus, establishing appropriate inhibitory responses and potentially strengthening the sphincter muscles. In addition to delaying urination, children are typically instructed to increase fluid consumption above normal levels. By doing so, they experience more frequent urges to urinate, providing more opportunities for mastering retention control. The RCT has been shown to increase FBC, as expected, and result in cessation of bedwetting in 30–50% of children (see Freeman & Dexter, 2002).

Another approach that is often utilized is some form of night-waking schedule. With this approach, the youth is awakened (either by an adult or an alarm) at a predetermined time and is prompted to use the restroom. Often, the waking time is systematically altered on the basis of the presence or absence of continence. For instance, if wetting is discovered to occur at approximately 1:00 am, then the initial waking time may be set for 12:30 am. Subsequently, after a specified consecutive number of dry nights, the waking time may be shifted to 1:00 am, and then 1:30 am, and so on, based on the absence of accidents. By systematically shifting the waking time, theoretically, the child is strengthening the inhibitory responses for progressively longer periods of time, potentially decreasing the sensitivity to urine in the bladder and/or strengthening the sphincter muscle. Some evidence suggests that waking schedules may reduce or even eliminate bedwetting episodes (e.g., Bollard & Nettlebeck, 1982). However, others have questioned the effectiveness of this approach. In general, evidence suggests that this approach is less effective than the urine alarm, although it may be a useful component of a package intervention (Warzak & Friman, 1994).

Other interventions that have been described in the literature include reinforcement contingent on continence, self-monitoring, dry bed training, and use of stream interruption exercises (i.e., starting and stopping the flow of urine). Evidence suggests that, although these strategies may be effective in some instances and/or as components of package interventions, they are not as effective as the urine alarm (Friman & Warzak, 1990; Lyman, Schierberl, & Roberts, 1988). Thus, for most youth, they should be considered as an adjunct to treatment.

8.2.3.2 Medications and Their Mechanisms of Change

Imipramine. Historically, tricyclic antidepressants were the drugs of choice for the treatment of enuresis, and imipramine was the most frequently prescribed drug treatment (Blackwell & Currah, 1973; Foxman et al., 1986; Stephenson, 1979). The mechanism by which imipramine reduces bedwetting is still, for the most part, unknown (Stephenson). However, it is important to note that imipramine somehow reduces premature contractions of the bladder following partial filling, thereby increasing FBC (Stephenson).

While imipramine produces initial reductions in wetting in a majority of children often within the first week of treatment (Blackwell & Currah, 1973), therapeutic gain appears to be constrained to only the period when the child is taking the drug. Reviews on both short- and long-term studies show that enuresis usually recurs when tricyclic therapeutic agents are withdrawn. The permanent cure produced with imipramine is reported to be 25% (ranging from 5% to 40%; Blackwell & Currah; Houts et al., 1994). However, we did not find any study that factored in the annual spontaneous remission rate of 15%, which could reduce this already low figure considerably.

More importantly, the use of imipramine does not teach continence skills. In fact, by diminishing bladder contractions, it reduces the opportunities for learning sensory awareness of those contractions and the practice of needed responses. This reduced opportunity to learn may account for the high relapse rate following termination of the medication as well as the reports showing that drug regimens can impair subsequent continence skill-training programs (Houts, Peterson, & Liebert, 1984). Finally, imipramine can cause several untoward side effects ranging in severity, from excessive sweating, irritability, nausea, and vomiting to convulsions, collapse, coma, and death (e.g., Cohen, 1975).

Given its low cure and high relapse rates, side effects, potential to diminish skill development, and potential toxicity, imipramine should not be used as a primary treatment for enuresis. However, as its effects are seen so quickly (when they occur), it can be a valuable adjunct to treatment, especially when other methods are failing and a dry night is needed to heighten motivation, or when a child plans to attend camp or a sleepover (Friman, 1986, 1995, 2007, 2008; Friman & Jones, 2005).

Antidiuretics. As described in the section on nocturnal polyuria, Norgaard et al. (1985) reported on a small number of enuretic children who had abnormal circadian patterns of plasma vasopressin concentration. As a result of these reports and because of its known antidiuretic properties, DDAVP rapidly became a popular treatment for enuresis and has now displaced the tricyclics as the most prescribed treatment. DDAVP concentrates the urine, thereby decreasing the urine volume and intravesical pressure, which makes bladder neck to descent, bladder contraction less probable, and nocturnal continence more probable.

Research on DDAVP has yielded mixed results and a review of the literature indicated that fewer than 25% of children became fully dry on the drug, and, similar to tricyclics, its effects appeared to last only as long as the drug was taken and were less likely to occur in younger children or children who had frequent accidents (Moffatt et al., 1993; see also Houts et al., 1994). In addition, DDAVP is very expensive. Finally, because DDAVP reduces urine output, it also reduces the opportunities to practice continence skills.

Nonetheless, DDAVP typically produces immediate effects. Previous research also suggests that it has fewer side effects than imipramine (e.g., Dimson, 1986; Norgaard et al., 1985),

thus, making it more preferable. However, recent reports by the U.S. Food and Drug Administration (FDA) have raised concerns on the serious side effects of desmopressin distributed in its most popular form – nasal spray. As a result, the U.S. FDA has recommended that the nasal spray form of DDAVP should not be considered as a front-line intervention for NE (US FDA, 2007). This recent recommendation is likely to have a notable impact on the interventions for NE, given the pervasiveness of the problem and the popularity of DDAVP as a treatment. Importantly, pediatric psychologists may be able to successfully capitalize on the gap in treatment options available to medical providers, by offering behavioral intervention services.

8.3 Encopresis

8.3.1 Recognition of Symptoms and Their Assessment

Functional encopresis (FE) is a common, undertreated, and often overinterpreted form of fecal incontinence. Although all forms of incontinence require evaluation and treatment, when left untreated, FE is more likely to lead to serious and potentially life-threatening medical sequelae and seriously impaired social acceptance, relations, and development, than other forms. The reasons for the medical sequelae will be summarized briefly. The primary reason for the social impairment is that soiling evokes more revulsion from peers, parents, and important others than other forms of incontinence (and most other behavior problems). For example, severe corporal punishment for fecal accidents was recommended by professionals in the late nineteenth century (Henoch, 1889). The professional approach to FE has evolved substantially since then, but the approaches by lay persons (and still some professionals) are not keeping pace. Children with FE are still frequently shamed, blamed, and punished for a condition that is almost totally beyond their control (Chrisophersen & Friman, 2004; Friman, 2003, 2007, 2008; Friman, Hofstadter, & Jones, 2006; Levine, 1982).

The definition of FE has remained relatively consistent across versions of the DSM; the DSM-IV-TR (APA, 2000) lists four criteria for FE: (1) repeated passage of feces into inappropriate places, whether involuntary or intentional; (2) at least one such event a month for at least 3 months; (3) chronological age of at least 4 years (or equivalent developmental level); and, (4) the behavior is not exclusively due to the direct physiological effects of a substance or a general medical condition, except through a mechanism involving constipation. The DSM-IV-TR describes two types: primary, in which the child has never achieved fecal continence, and secondary, in which incontinence returns after at least 6 months of continence. Further, one can specify whether encopresis is associated with constipation and incontinence overflow versus that without constipation. Approximately 3% of the general pediatric population meets these criteria.

8.3.1.1 Evaluation

Initial evaluation of FE should include attention to toileting habits, bowel movement frequency, consistency of fecal matter (e.g., hard, packed matter or loose, almost liquid-like diarrhea), and

strategies that parents use to address toileting, more generally, and soiling, more specifically. Further, screening for general emotional and behavioral status, as well as family and parenting characteristics that may be of indirect or direct importance (e.g., harshness in discipline) should be carried out.

Screening regarding bowel movements is somewhat complicated by the lack of empirical evidence regarding the typical frequency of bowel movements in healthy, non-constipated children. Research has shown that, in healthy children, typical colonic transfer time (i.e., the time for matter to travel through one's system from mouth to expulsion) ranges from 25 to 84 h (Wagner, Shankar, Turnock, Lamont, & Baillie, 2004). Thus, one should expect notable variability in the frequency of bowel movements. The clinical convention is often to consider the frequency of bowel movement of every 3 days as the upper limit of normal. Indication that a child is regularly experiencing 3 or more days between the bowel movements is probably a strong sign that constipation is present, showing that decreased motility is occurring.

Similar to enuresis, after initial assessment by psychologist, the plan should follow a "go no further with treatment" maxim until the child has received a medical evaluation. One fundamental reason is the rare but real possibility of organic disease (discussed later). Another is the very serious problem of excessive waste accumulation in an organ with a finite amount of space (i.e., colon). An unfortunate, all too frequent presenting problem in medical clinics is the prevalence of encopretic children who have been in extended therapy with nonmedical professionals whose initial evaluation did not include referral for a medical evaluation, and whose treatment did not address known causes of FE (e.g., diet, behavior, constipation). As a result, the children's colonic systems can become painfully and dangerously distended, sometimes to the point of being life threatening (e.g., McGuire, Rothenberg, & Tyler, 1983).

Estimates of the presence of constipation in children with encopresis range from 80% to 95% (Hatch, 1988; Partin, Hamill, Fischel, & Partin, 1992). For example, in an early study on 102 children with FE, 81 were found to have stool impaction at the time of the first visit. Of these 81 children, 39 were treated for constipation in infancy (Levine, 1975). This fact by itself seriously undermines any general discussion on the psychosocial etiology for FE. In most cases, the parents need to be assured that their child's FE is not their fault and is not caused by a psychological disturbance. The medical examination can contribute substantially to this assurance. The physician will typically take a thorough medical, dietary, and bowel history. In addition, an abdominal examination and rectal examination is often necessary to check for either large amounts of stool or very dry stool in the rectal vault, and to check for poor sphincter tone. Approximately 70% of the constipation can be determined on physical exam, and 90% is apparent from viewing a KUB (Barr, Levine, Watkins, & Mulvihill, 1979), which is a plain abdominal radiological film (focused on the kidney, ureter, and bladder; hence, KUB) and is helpful in determining FE when a fecal mass is not detected during a physical examination, when working with children difficult to treat, such as those who refuse a rectal exam or are obese (Loening-Baucke, 1996).

Some medical conditions (e.g., Hirschsprung's disease), if identified, may preclude referral to a behavioral practitioner. Levine (1981) provided an excellent tabular comparison for the clinician to differentiate FE from Hirschsprung's disease (the most common organic cause for bowel dysfunction that is present from birth), which was reproduced in the work of Christophersen and Mortweet (2001). Additionally, the absence of weight gain in a child who

is below the growth curve for weight may be suggestive of one of the variety of malabsorption syndromes that are known to be present in a small percentage of children (cf. Barr et al., 1979). These possibilities, therefore, necessitate the evaluation by a physician, often a pediatric gastro-enterologist, before embarking on psychosocial interventions.

8.3.2 Etiological and Maintenance Factors

8.3.2.1 Physiology of Defecation

The large intestine or colon is the distal end of the alimentary tract that is sequentially composed of the esophagus, stomach, biliary tract, and the intestines (small and large). The colon is a tubular organ shaped like an inverted 'U' that connects to the small intestine via the ileum, from which it receives nonnutritive (fecal) waste in liquid form. It is best understood in terms of six components, the ascending, transverse, descending, and sigmoid colons, and the rectum and anus. The colon has three major functions: storage of, fluid absorption from, and evacuation of waste. Extended storage and planned evacuation of fecal waste into an appropriate location are the defining features of fecal continence. Evacuation is achieved through a motor function called peristalsis, involving a wavelike motion of the walls of the colon. Retrograde peristalsis in the ascending colon keeps the liquid fecal waste in contact with the walls of the colon that absorb the moisture, resulting in gradual solidification of the waste that begins to move forward as it takes on mass. Movement occurs over an extended period and is stimulated by external events. Examples of these events include gross motor activity, resulting in the orthcolonic reflex, and eating, resulting in the gastro-colonic reflex.

Typically, the rectum contains little or no fecal matter, but when colonic movement leads to contraction of the sigmoid colon, feces are propelled into the rectum and its distension stimulates sensory receptors in the rectal mucosa and the muscles of the pelvic floor. Two muscle-based "switching systems", the internal and external sphincters, regulate the fecal progression from that point. The internal sphincter is involuntary and opens only through the stimulation generated by the process described earlier. As fecal mass distends the rectum, the external sphincter can be manipulated using three muscle groups (thoracic diaphragm, abdominal musculature, levator ani) to start or stop defecation (these muscle groups are also used to start or stop urination). Thus, fecal continence requires appropriate responses to stimulation generated by a waste-receiving organ system. In very general terms, the purpose of fecal toilet training is to acquaint the child with the proprioceptive feedback from the colon and to coordinate the relaxing of the external anal sphincter with the appropriate positioning over a potty chair or a toilet (for additional information on bowel function, see Chrisophersen & Friman, 2004; Friman, 2003, 2007, 2008; Friman et al., 2006; Levine, 1982; Weinstock & Clouse, 1987; Whitehead & Schuster, 1985).

8.3.2.2 Constipation

Constipation affects the delicate system in place to move fecal matter through the final components of the alimentary tract. Specifically, large masses of fecal matter stretch the colon,

reducing the ability of the muscles to engage in peristalsic movements. Further, nerve endings in the colon habituate to the sensation of fecal matter that typically signals the need for peristalsic movements; in other words, the sensation decreases, and thus, the likelihood of experiencing the urge to defecate decreases.

Successful treatment for FE targets the processes that cause the condition, and 90–95% of the cases occur as a function of, or in conjunction with, constipation and fecal retention, and the various behavioral/dietary contributing factors including: (1) insufficient roughage or bulk in the diet; (2) irregular diet; (3) insufficient oral intake of fluids; (4) medications that may have the side effect of constipation; (5) unstructured, inconsistent, and/or punitive approaches to toilet training; and (6) toileting avoidance by the child. Any of these factors, singly or in combination, puts the child at risk for reduced colonic motility, actual constipation, and corresponding uncomfortable or painful bowel movements. Uncomfortable or painful bowel movements, in turn, negatively reinforce fecal retention, and retention leads to a regressive reciprocal cycle often resulting in regular fecal accidents. When the constipation is severe or the cycle is chronic, the child may develop fecal impaction, a large blockage caused by the collection of hard dry stool in the colon. Not infrequently, liquid fecal matter will seep around the fecal mass producing "paradoxical diarrhea." Although the child may actually be constipated, he or she may appear to have diarrhea. Some parents will attempt to treat this type of "diarrhea" with the over-the-counter antidiarrheal agents, which would only worsen the problem. Alternatively, parents may not appreciate the possibility of constipation because their child continues to have bowel movements.

Of note is that a small minority of cases of encopresis do not involve any problems with colonic motility or constipation; they involve regular, well-formed, soft bowel movements that occur somewhere other than the toilet. The process underlying these cases is not well understood, except that they tend to be treatment resistant (Chrisophersen & Friman, 2004; Friman, 2003, 2007, 2008; Friman et al., 2006; Landman & Rappaport, 1985).

8.3.2.3 Developmental and Behavioral Issues

The attainment of full continence is a developmental milestone and thus, FE itself is a developmental issue. In children with general developmental disabilities, the attainment of continence is almost always delayed, although authoritative epidemiological research on the extent of those delays in that population is unavailable. Early descriptive studies describe developmental delay, mental retardation, and/or neurological impairment as a factor in up to 30% of the cases of FE (Wright, Schaefer, & Solomons, 1979). Beyond the possible correlations with learning disability, no research has demonstrated that FE in typically developing children is associated with delays in specific areas of development other than delayed continence.

Historically, the development of FE was believed to be the result of psychopathological processes, particularly in the areas of behavioral and personality disturbance (e.g., Wright et al., 1979). Yet, at least three early studies and one recent study have failed to confirm this position (Cox, Morris, Borowitz, & Sutphen, 2002; Friman, Mathews, Finney, & Christophersen, 1988; Gabel, Hegedus, Wald, Chandra, & Chaponis, 1986; Loening-Baucke, Cruikshank, & Savage, 1987), and instead, show that only a subset of children with encopresis experience clinically relevant emotional or behavioral problems. Thus, as a group phenomenon, the development of FE cannot be traced to psychopathological variables. And the research on positive

behavioral changes following successful treatment suggests that elevated psychological problems, when present, may be more of a consequence than a cause of FE (Levine, Mazonson, & Bakow, 1980; Young, Brennen, Baker, & Baker, 1995).

Yet, there are several caveats to this conclusion. For example, encopretic children with elevated psychological problems are also at risk of treatment failure (Levine & Bakow, 1976; Stark, Spirito, Lewis, & Hart, 1990). This risk may be related to treatment resistance, because a cardinal constituent of any set of child-behavior problems is noncompliance. Because of the physiology of fecal elimination, delays in toileting resulting from resistance can lead to stool retention (see section on physical factors influencing behavior). Early papers on the functional position on FE, as well as the current literature reviews on delayed toilet training, argue that when children are predisposed to constipation, opposition to training can devolve delayed toilet training into chronic FE (Chrisophersen & Friman, 2004; Friman, 2003, 2007, 2008; Friman et al., 2006; Levine, 1982; Levine & Bakow, 1976).

The most recent research involving developmental implications has explored this argument by focusing on delayed toilet training or resistance to it, rather than FE itself. Blum, Taubman, and Osborne (1997) showed that constipation is significantly more prevalent in children who resist fecal-continence training. A subsequent study (Blum, Taubman, & Nemeth, 2004) attempted to determine the functional subcomponents of toilet-training resistance and their association with constipation. The study investigated the relationship between general oppositional behavior, difficult temperament, and child resistance to fecal-continence training. Using a semistructured interview and a specific task (room clean-up) to explore oppositional behaviors as well as a standardized instrument to explore temperament, the results obtained showed no differences in oppositional behavior between children resisting toilet training and those who were fully trained. There was a trend toward a significant elevation ($p = 0.068$) in temperamental difficulties in the children resisting toilet training. A follow-up study investigated the relationship between "stubbornness," a colloquial term for a cluster of temperamentally relevant behaviors, and pediatric constipation. The primary finding was that children exhibiting constipation also exhibited significantly more stubbornness, in general, and toileting-related stubbornness, in particular (Burket et al., 2006).

8.3.2.4 Learning and Modeling

All toileting-relevant behavior occurs in a learning context, and all family members and peers who exhibit such behavior in the presence of an encopretic child serve as possible models. In early attempts to sketch the accounts of FE in learning-based terms, Levine et al. described a developmental trajectory guided forward by disordered defecation dynamics and their subsequent influence on toileting behaviors (Levine, 1982; Rappaport & Levine, 1986). Not surprisingly, the cardinal variable in this account was constipation. The delay was found to increase the difficulty and discomfort that accompanies bowel movements (see section on physical factors affecting behavior), and there are numerous studies showing that effort and discomfort can cause avoidance (Friman & Poling, 1995). Avoidance of discomfort associated with bowel movements negatively reinforces toileting resistance. In turn, successful toileting resistance leads to stool withholding, which has the same effects on bowel movements as constipation itself, and thus, it is possible that the resistance rather than the constipation is the more important consideration. However, research on this question has suggested that constipation usually

precedes toileting refusal, and thus, it is more likely to be the primary influence. Other research has shown that children who resist toilet training often have histories of painful bowel movements and/or constipation (Luxem, Christophersen, Purvis, & Baer, 1997; Taubman, 1997).

The account offered by Levine includes other types of experiences that contribute to the learning-based dimensions of FE (Levine, 1982; Rappaport & Levine, 1986). These include an array of events that are potentially aversive, but which are also often a part of the toileting training process. For example, children sitting on an adult toilet with unsupported feet can experience discomfort in their legs. Children may experience aversive levels of vulnerability, if they are required to have a bowel movement away from home. To avoid such experiences, children may forestall the urge to defecate and in so doing, retard the natural progression of the peristaltic process leading to situational constipation. There are several other possible experiences, such as inconsistent schedules, family strife, inconvenient bathrooms, and isolation, and all these can have learning-based influences on toileting and thus, on the possibility of FE.

8.3.2.5 Parental Issues

As parents (or primary child caregivers) are responsible for toilet training, they are inextricably involved in their children's failure to attain continence. This failure can be attributable to a broad range of variables ranging from parental abuse and neglect to inability to effectively manage protracted constipation and extreme child resistance. To date, these variables have been the subject of conceptually and clinically derived descriptive accounts, much more than they have been the object of focused research (e.g., Levine, 1982; Rappaport & Levine, 1986; Schaefer, 1979). Although no scientific evidence exists for extreme attributions about parental involvement in FE found in psychodynamic accounts (e.g., mothers domineering and lacking warmth, fathers ineffectual and bossy), clearly, parents can play an important role in the development and progression of FE as well as its sequelae. For example, incontinence has been described as a leading cause of child abuse (Helfer & Kempe, 1976). More frequently, it can lead to parental responses that, although not abusive, are indeed punitive. A common diagnostic question in the assessment of FE is whether the target child ever attempts to obscure evidence of accidents (e.g., hides underwear), and it is often answered in the affirmative (Levine, 1982). Such behavior is the result of punishing experiences that were initiated by the parents, although not always intentionally. For example, parents faced with their children's unexpected fecal accidents may unintentionally express disappointment or frustration, which in turn could have punitive effects on children who want nothing more than to please their parents. However, clearly, the punitive response to fecal accidents is sometimes intentional. For descriptions of how such responses may come about, refer to selected early accounts of FE (e.g., Levine, 1982; Rappaport & Levine, 1986; Schaefer, 1979).

A parent variable that has some empirical support involves the extent to which parents bring their children under effective instructional control. One of the prerequisite skills necessary for successful toilet training is the child's ability to follow multiple one-step commands. The skill is needed, because toilet training is a complex process, and training episodes, especially in the early stages, require multiple parent-issued, child-followed instructions. Children may be developmentally capable of following such instructions, but reluctant to do so owing to general oppositionality, aversion to toileting, or both. To contend with such problems, parents must be able to bring about good child compliance (i.e., training) with toileting-based

instructions. Related research shows that parents of children at risk for FE owing to toileting refusal have significantly more difficulty in setting limits and establishing instructional control than those of children who are not at risk (Taubman, 1997).

8.3.2.6 Life Events

The alimentary system is exquisitely sensitive to life events and because fecal elimination is the terminal response of the system, it is also highly responsive to these events. However, beyond psychosocial issues that affect the quality of toilet training (e.g., poverty, size of family), life events are much more likely to contribute to secondary than primary FE. For example, a study on classification of incontinence (Fritz & Anders, 1979) showed a large increase in the onset of secondary FE in children who had recently experienced a stressful life event (e.g., hospitalization, parental separation).

8.3.2.7 Genetic Influences

In contrast to the substantial literature on the genetics of enuresis, there is only limited literature on the genetics of FE, which is dated. For example, Bellman (1966) reported that 15% of the fathers of the children in her study had a history of FE. Furthermore, Abraham and Lloyd-Still (1984) reported that 55% of their chronically constipated patients had a positive family history of constipation. Despite the design limitations and time period of these studies, the results suggesting positive family history in the development of FE, at a minimum, seem to supply an inducement to study genetic influences further.

8.3.2.8 Drugs Affecting Behavior

There are a number of medications prescribed for children that can influence elimination. For example, most prescription level medications for pain relief, and especially those that involve opiates or their derivatives, can cause constipation. In addition, most antibiotics can cause temporary diarrhea. Antidepressant medications, especially those involving selective serotonin-reuptake inhibition, can cause either diarrhea or constipation. However, all these medications are accompanied upon receipt with a thorough and minutely detailed description of side effects, and those that involve the GI tract will almost certainly be familiar to the prescribing physician. Rather than going into further detail here, the most useful advice is to incorporate caution about medications and their influence on fecal elimination, and clarify any doubts with the supervising physician.

8.3.2.9 Cultural and Diversity Issues

There is much less epidemiological research on FE than on NE. Presently, there is virtually nothing to be found in the peer reviewed literature on cultural issues, beyond the occasional suggestion that FE is more likely to be found in families with lower incomes. Yet, even this

suggestion has been dismissed as inaccurate and based on biases in populations sampling (Fritz & Armbrust, 1982). However, some early research on prevalence indicated that FE is much more frequent in boys than in girls with the ratios ranging from 3:1 to 6:1 (e.g., Fritz & Armbrust; Wright et al., 1979). Some of the relevant research was conducted in foreign countries (e.g., Stockholm; Bellman, 1966), but the samples were primarily Caucasian from industrialized cultures and thus, not substantially different from the populations studied in this country.

8.3.3   Evidence-Based Treatment Approaches

Although the child is the target of treatment, the parent (or primary caregiver) is the delivery agent and thus, the primary recipient of the information about the treatment. Discussing treatment in general terms with the child while expressing optimism about the outcome is a good practice. Additionally, any punitive parental responses toward fecal accidents, intentional and unintentional, should be terminated immediately. Requesting a related promise from the parent in the presence of the child can increase the child's interest in participation. Treatment is subsequently laid out in a series of steps. Numerous protocols and variations in treatment have been described in the literature (e.g., Levine & Bakow, 1976; Stark, Owens-Stively, Spirito, Lewis, & Guevremont, 1990; Stark et al., 1997; Taubman, Blum, & Nemeth, 2003; for summaries, also see McGrath, Melton, & Murphy, 2000; van Dijk, Benninga, Grootenhuis, Onland-van Nieuwenhuizen, & Last, 2007). Evidence from existing research supports an approach that involves (a) education about the physiological and learning variables associated with toileting, (b) disimpaction, (c) increased structure surrounding toileting activities and use of motivational strategies, (d) dietary and fluid intake interventions, and (e) maintenance of interventions.

8.3.3.1 Demystifying FE

During or immediately following the evaluation, the entire elimination process including its disordered manifestations should be "demystified" (Levine, 1982). The belief, from longstanding characterological and psychopathological perspectives on FE, that bowel retention and bowel accidents are generally associated with personality development, and specifically, with characteristics such as stubbornness, immaturity, or laziness, can result in parents shaming and blaming their children to make use of the bathroom. However, a disordered process of elimination such as FE should no more be a target for censure and blame, but should be a disordered process of respiration, digestion, or motor movement. As indicated earlier, the literature does not reflect a significant association between psychological profiles and child bowel problems.

8.3.3.2 Bowel Evacuation

The primary goal of FE treatment is the establishment of regular bowel movements in the toilet, and the first step is to cleanse the bowel completely of the resident fecal matter. A variety of

methods are used, the most common of which involve enemas and/or laxatives. Although the therapist can assist with the prescription of these (e.g., with suggestions about timing, interactional style, behavioral management), the evacuation procedure must be prescribed and overseen by the child's physician. Typically, evacuation procedures are conducted in the child's home, but severe resistance can necessitate medical assistance, in which case they must be completed in a medical setting. The ultimate goal, however, is complete parent management of evacuation procedures, because they are to be used whenever the child's elimination pattern suggests excessive fecal retention.

8.3.3.3 Toileting Schedule

The parent and therapist should choose a regular time for the child to attempt bowel movements. The time should not be during school hours, because unpleasant social responses to bowel movements in the school setting can cause regressive responses to treatment (e.g., retention). Choosing among the times that remain (morning, afternoon, or evening) should be guided by the child's typical habits and child–parent time constraints. Establishing a time shortly after food intake can increase chances of success through the influence of the gastrocolonic reflex. In the early stages of treatment or in difficult cases, two scheduled attempts a day (e.g., after breakfast and dinner) may be necessary. The time the child is required to sit on the toilet should be limited to 10 min or less, to avoid unnecessarily increasing the aversive properties of the toileting experience. The child's feet should be supported by a flat surface (e.g., floor or a small stool) to increase comfort and maintain circulation in the extremities, and knees should be bent at approximately 90% angle, to facilitate the abdominal push necessary to expel fecal matter from the body. The time should also be unhurried and free from distraction or observation by anyone other than the managing parent. Allowing the children to listen to music, read, or talk with the parent can improve the child's attitude toward toileting requirements. Generally, toileting should be a relaxed, pleasant, and ultimately private affair.

8.3.3.4 Response to Toileting Efforts

If the child has a bowel movement in the toilet, he or she should be praised. In the early stages of treatment, it is also helpful to have a reward system in place. An easy system involves a dot-to-dot drawing and a grab bag. The child identifies an affordable and desirable prize, and the parent draws (or traces) a picture of it using a dot-to-dot format with every third or fourth dot bigger than the rest. The child connects two dots for each bowel movement in the toilet and when the line reaches a larger dot, they earn access to a grab bag with small rewards (e.g., small toys, edibles, money, privileges). When all the dots are connected, the child earns the prize (Jenson & Sloane, 1979; also see Chrisophersen & Friman, 2004; Friman, 2003, 2007, 2008; Friman et al., 2006). For children who are resistant to various aspects of the toileting process (e.g., sitting, taking medicine) or for whom producing regular bowel movements has been severely disrupted owing to persistent constipation, it may be advisable to develop a reward system, whereby completing each component of the treatment (e.g., sitting, taking medicine) earns connections, while some acts (e.g., defecating in the toilet) warrant connecting more

dots. If such a system is developed, then the larger dots that lead to the grab-bag prizes should be distributed farther apart. A less elaborate, more naturalistic, but also more time-intensive procedure, involves the provision of special time. For example, following successful toileting, a child might be allowed 10–15 min of special time with a parent, during which the child is allowed to choose the activity (Christophersen & Mortweet, 2001). If the child does not have a bowel movement, his/her effort should be praised and another session should be scheduled for later in the day. Regardless of the specific reward system pursued, the goal remains the same: to create motivation for completing toileting-related activities and the benefit for successful defecation.

8.3.3.5 Response to Accidents

Accidents should not be the object of punishment or criticism. However, the child should participate in cleaning up the mess that has been made. With younger children, this may merely mean bringing soiled clothing to the laundry area and allowing themselves to be cleaned by the parent. With older children, it may mean managing entire mess themselves including doing the laundry and cleaning themselves. Children should earn praise and rewards for any bowel movements in the toilet, even if they had a prior accident.

   However, in treatment resistant cases, mild aversive consequences are sometimes used. Although there is limited documentation of their effects, there is ample evidence of their use. One example, a procedure called positive practice, involves intensive practice of appropriate toileting behaviors following detection of an accident (e.g., a series of "dry run" trips to the bathroom from locations near the detection of the accident; see Christophersen & Mortweet, 2001). Another example, for which a small amount of data has been published, involves a response cost procedure – using small tokens to reward toileting success and withdrawal of tokens (i.e., small "fines") for accidents (Reimers, 1996). Again, for children resistant to various aspects of treatment (e.g., taking prescribed laxative), mild aversive consequences may be applied to instances of noncompliance. Any use of mild aversive consequences should always occur in the context of a comprehensive intervention that includes specific reward strategies.

8.3.3.6 Cleanliness Training

Successful toileting is a complex arrangement of small tasks, and the two tasks that are critical to overall success but often overlooked in fecal incontinence programs are wiping and flushing. The therapist should provide the parents instructions on how to motivate and teach children to complete these tasks. Direct instruction to the child regarding methods of wiping, as well as the importance of persistence in wiping until the paper is free from fecal matter is often important.

8.3.3.7 Monitoring

Frequent monitoring accomplishes at least three goals, early detection of accidents, assessment of progress, and multiple opportunities for praise. Two levels of monitoring are usually

employed. The first involves regular "pants checks" that result in praise when pants are accident-free, and carrying out the procedure for accidents described earlier when they are not. One should consider the developmental age of the child when determining whether the pant checks are completed by the parent (younger child), or are prompted by the parent for completion by the child (older child). The second involves a record completed by the parent that documents toileting successes and accidents, and the size and consistency of both. The latter record is made easier by providing the parent with a user-friendly data sheet.

8.3.3.8 Dietary Changes

As discussed in the section on underlying processes, diet often plays a causal role in FE, and dietary changes are almost always a part of treatment. One of the keys to establishing full fecal continence is a regular diet with a high level of dietary fiber. Fiber increases colonic motility and the moisture in colonic contents and thus facilitates easier and more regular bowel movements. To aid the parents in increasing the fiber content in their child's diet, an educational handout can be helpful (e.g., see Christophersen & Mortweet, 2001). Dietary changes can also be enhanced with over-the-counter preparations with dense fiber content (e.g., Benefiber, Metamucil, Perdiem). Further, while not empirically demonstrated to be a necessary component of treatment, increasing fluid intake is often prescribed in conjunction with high-fiber foods (e.g., Stark et al., 1990, 1997).

8.3.3.9 Facilitating Medication

Successful treatment for FE will almost always require inclusion of medications that soften the fecal matter, ease its migration through the colon, and/or aid its expulsion from the rectum. The decision to use medication and the type used should be made by the consulting physician; however, the therapist can inform the decision and educate the parent about its use. Generally, it is best to avoid interfering with the sensitive biochemistry of the alimentary system, the colonic portion of it in particular, and thus, inert substances are usually used. Formerly, the most frequently used substance was mineral oil, used either alone or in combination with other ingredients such as magnesium. As indicated, prescription of the substance is the physician's prerogative, but ensuring compliance with the prescription is typically a psychological task. Children will often resist ingesting substances with odd tastes and textures. Therefore, to gain their cooperation, it is often necessary to mix the substances with a preferred liquid (e.g., orange juice) and follow ingestion with praise, appreciation, and possibly, a reward. A recent development, however, has made this task even easier, while also improving the outcomes for children with FE. Polyethylene glycol (trade name, Miralax) is an odorless, tasteless powdered laxative that can be mixed with food or liquid with limited possibility of child detection, and it has produced excellent results in treatment of childhood constipation and FE, and is increasingly becoming the preferred medical treatment option (e.g., Bishop, 2001; Pashankar & Bishop, 2001). Further, its transition to an over-the-counter medication has increased its accessibility.

A more invasive substance involves glycerin suppositories. Some physicians prescribe these because their use increases the predictability of bowel movements and reduces the likelihood

of an out-of-home accident. When prescribed, suppositories should be used in the following sequence. Prior to the meal closest in time to the regularly scheduled toileting, the child should attempt a bowel movement. If successful, regular procedures are followed and no suppository is given. If unsuccessful, a suppository should be introduced by the parent in the meal eaten by the child, and another attempt should be made after the meal. The combination of the gastro-colonic reflex initiated by the meal, and the lubrication and mechanical stimulation provided by the suppository is usually sufficient to induce a bowel movement. Despite these advantages, inserting suppositories into a child's body can engender resistance, and in such cases, the therapist can assist the process by teaching the child on how to relax under stressful circumstances, and the parent on how to use instructional and motivational procedures to enhance compliance.

8.3.3.10 Fading Facilitative Medication

Being aware that medication is the area of the physician, therapists can assist with its use by establishing methods to ensure it is taken (as stated earlier), and design systematic steps for its ultimate withdrawal. Obviously, partnership with the consulting physician is necessary in both the cases. Before pursuing fading-out medications, it is important to ensure that *both* regular bowel movements of sufficient size and continence occur for successive days, to ensure that the child is not inadvertently becoming constipated via withholding so as to avoid accidents.

A frequently used withdrawal method is to eliminate the medication on one day a week contingent, upon a series of consecutive accident-free, toileting success days (e.g., 14 days). The child is allowed to choose the day on which to do so. If another similar series of accident-free days occurs, another day is chosen. If the child has an accident, then the medication is replaced on one day. The parent and the child go back and forth inside this system, until the medication is completed faded out.

8.3.3.11 Treatment Resistance

As indicated earlier, in some cases, direct FE treatment may be forestalled by, or conducted in conjunction with, the treatment for the resistance (e.g., with instructional control training, and/or psychotherapy). However, some treatment-resistant cases involve abnormal defecation dynamics (e.g., rectal distension, decreased sensitivity), much more than abnormal externalizing or internalizing behavior problems. For these cases, various forms of biofeedback have been used to increase awareness and establish bowel habits (e.g., Loening-Baucke, 1990).

8.3.3.12 Intervention Delivery Approaches

Treatments for encopresis have been shown to be effective when delivered to individual children and families (see McGrath et al., 2000 for review), as well as through group therapy (Stark et al., 1990, 1997). Recently, Ritterband et al. (2003) demonstrated that an internet-based method of delivering behavioral interventions for encopresis may be a useful adjunct to management by

primary-care physicians. While more questions need to be answered regarding child and family characteristics influencing the effectiveness of delivering intervention via the internet, these preliminary data provide evidence for a method of treatment with potential for easy and wide distribution.

8.3.4   Mechanisms of Change Underlying the Intervention

Comprehensive treatment of FE addresses both biological and behavioral influences of the condition. Various medical and dietary interventions are employed to treat the primary underlying cause of FE in 90–95% of cases, which is constipation. Regular passage of fecal matter allows the colon to resume proper shape and sensitivity to the presence of fecal matter. As this may take time, prescribing physicians may recommend that a child continue medications for a sustained period before gradually reducing the dose. Strategies used to promote regular and easily passed bowel movements also aid in avoidance learning processes that may contribute to stool withholding. Specifically, softening of the stool via medications or dietary means leads to the passage of bowel movements that are not painful. This can serve as a counter-conditioning experience, whereby the passage of feces is disassociated with pain, thus, decreasing the likelihood of future avoidance attempts.

While medical and dietary interventions are important for the treatment of FE, effective management and behavioral strategies are critical for the ultimate success. Specifically, structuring toileting experiences (e.g., scheduled sits) and behavioral-management strategies facilitate the (re)learning on the part of the child, to initiate specific toileting behaviors in response to physical signs of impending bowel movements, provide motivation to leave current activities to enter into the bathroom to attempt a bowel movement, and assist in teaching children the benefit of avoiding accidents through correct defecation.

8.4   Basic and Expert Competencies of the Clinician

There are myriad ways to describe basic and expert competencies for clinicians confronted with either of the major incontinence disorders, enuresis and FE. For this discussion, we will use the epistemological distinctions offered by Gilbert Ryle (1949) in his classic book, *The Concept of Mind*. Ryle distinguished between "knowing how" and "knowing that." More colloquially, he distinguished between knowing how to do something and knowing how to say what is or must be done. Verbal humans possess multiple capacities for describing performances that they are unable to execute competently. For example, most golfers know they should keep their head down and eye on the golf ball when they hit it with their club. That is, they are able to describe to themselves or others that this must be done. Few golfers, however, are able to actually do it with any degree of consistency. Conversely, all humans possess the capacities for performances that they are unable to describe verbally. A classic example of this was offered by the former Supreme Court justice, Felix Frankfurter, who reported that he knew pornography when he saw it but he could not put it into words. Other examples include initiating physical activities such as yawning or crying. Performing these activities is a simple affair; but describing how to initiate them, challenges even the most sophisticated physiologist.

8.4.1   Basic Competencies of the Clinician

Using Ryle's distinction as a guide, we assert that the basic competencies of the clinician involve either being able to assess and treat enuresis and FE effectively, or being able to describe how they should be assessed and treated. In other words, the basically competent clinician should have the skills to conduct effective assessment and treatment or tell the persons how to do so. Knowing how to tell others to conduct assessment and treatment comprises the "knowing that" skill set. Knowing how to actually conduct assessment and treatment comprises the "knowing how" skill set. Although there is obviously an intersection between the two skill sets, they are also independent from each other in important ways. For example, as stated earlier, when first faced with questions about treating enuresis or FE, ensuring that a medical evaluation has occurred is critical, before moving forward with direct behavioral or psychosocial interventions. A clinician possessing the "knowing that" skill set would be able to competently and persuasively tell others (e.g., students, parents) about the importance of the evaluation. A clinician possessing the "knowing how" skill set would be able to contact the physician, schedule the appointments, consult on tests needed, and possibly even attend and participate in the evaluation (both authors have attended and participated in numerous evaluations). As a more general example, a clinician possessing the "knowing that" skill set would be able to competently verbally convey all the assessment and treatment options for enuresis and/or FE described in this chapter. Included in this skill set would be the capacity to convey information that does not directly pertain to implementation of treatment (e.g., etiology, probability of success, behavioral mechanisms responsible for change). A clinician possessing the "knowing how" skill set would be able to actually conduct all the assessment and treatment options discussed in this chapter. Although exhibiting the "knowing how" skill set in its entirety would rarely be necessary when working with children and caregivers on an outpatient basis (e.g., parents would regulate fluid intake, modify diet, fasten alarms, facilitate toilet sits, etc.), it may often be necessary when working with children in inpatient or residential care programs.

A major reason for distinguishing between the "knowing how" and "knowing that" skill sets is that some clinicians teach and others practice. The teachers may be excellent at teaching and deficient at practice. Conversely, the practitioners may be excellent at practice and deficient at teaching. Both, however, are capable of exhibiting core basic competencies. Some clinicians are able to do both extremely well and we will use this comprehensive level of competency as the defining feature of expert competency in the subsequent related section. Another reason for using the distinction is that although a degree of teaching is needed in most cases (e.g., teaching parents how to use the urine alarm), in some cases, the clinician may be required to conduct treatment himself or herself (e.g., with clients who are inpatients or in residential care).

As indicated earlier, there is an intersection between the "knowing that" and "knowing how" skill sets. As a prime example, basically competent clinicians must be able to characterize enuresis and FE as biobehavioral conditions. Prolonged urinary or fecal incontinence, not caused by disease or other physiopathic variables, can easily lead caregivers and even medical and psychosocial professionals to assume that the accidents are caused by psychopathological factors. As was noted earlier, enuresis and FE are biobehavioral conditions, and psychological constructs such as psychopathology are rarely relevant (Friman, 1986, 1995, 2002, 2007, 2008; Friman & Jones, 2005). A related basic competency is to assess the notions (e.g., held by parents, children, students, professionals) on causes of enuresis and/or FE, so as to address inaccuracies.

Educating persons who are confronted with enuresis and/or FE to think about either conditions as a biobehavioral problem can move them toward workable solutions (e.g., proprioceptive cues of impending defecation have been disrupted owing to persistent constipation), and away from unconstructive and potentially harmful psychological or characterological interpretations of afflicted children's behavior (e.g., child is lazy). As may be evident, Ryle's distinction is pertinent here as well. Knowing that caregivers and children must be persuaded to adopt the biobehavioral model is a core basic competency. Furthermore, knowing how to persuade them to do so is also a core basic competency. It is not difficult to imagine persons who would be good at one and not the other. Ideally, they would be good at both, but this would be evidence of expert, not basic, level competency, which will be discussed later.

Another basic competency common to "knowing that" and "knowing how" skill sets involves eliminating caregiver's use of punishment, shaming, or blaming for toileting-related issues. Owing to frustration with perpetuated incontinence, coupled with the belief that the afflicted child is fully capable of controlling urination and/or defecation, caregivers can resort to harsh judgments and punitive consequences. However, rather than being helpful, harsh and/or punitive approaches are more likely to lead to additional undesired behavioral side effects, such as untruthfulness about the occurrence of accidents, refusal to discuss toileting-related topics, avoidance of bathroom-related activities, and unwanted emotional responses. These side effects can, in turn, exacerbate caregiver frustration and intensify harsh punitive approaches to the incontinent child. Punitive approaches can, in turn, worsen the behavioral side effects exhibited by the child. In other words, a punitive approach can lead to a reciprocally devolving process, resulting in avoidance of effective treatment by incontinent children and their caregivers. Therefore, knowledge pertaining to the importance of eliminating punishment is a core, basic competency. Although knowledge about the problems with punishment is a generic basic competency, the Rylean distinction also applies. Being able to describe punishment in its obvious and not so obvious forms, as well as the reasons it should not be used, comprises one dimension of the core competency. Having the facility to fully dissuade the caregivers from using it comprises the other.

Core basic competence related to the treatment of elimination disorders also requires a thorough appreciation for queries to be used, to assess the medically informative details about toileting habits (see ❯ Table 8.1 for example questions). Inquiry about specific elimination patterns and habits is informative, for two primary reasons. First, if the child is yet to see a pediatric healthcare provider regarding the elimination problem, answers to these questions may be provided to the healthcare worker to assist with medical diagnosis. Psychology clinicians should avoid presuming that a thorough medical examination has been completed, and thus, offering some initial assistance in this area to inform the healthcare provider can be useful. Second, even if it is determined that elimination problems are not related to an underlying physiological problem, knowledge about their presence may inform selection of behavioral interventions. For example, a child who presents with sudden, strong urges to urinate during the day with limited ability to delay micturition may benefit from RCT, in addition to interventions to directly treat bedwetting. Again, the distinction between "knowing that" (i.e., being able to describe the importance of and type of questions one should ask about elimination habits) and "knowing how" (i.e., being able to successfully gather pertinent information in a manner that is useful for medical providers) is relevant.

Familiarity with patterns of responsiveness to behavioral interventions is also important for a clinician with basic competence. Unlike medications used to treat enuresis and physiologic

🔷 **Table 8.1**

Sample questions to investigate the possible biological influences on enuresis and encopresis

Enuresis
1. Does your child ever dribble in his or her pants during the day?
2. Does your child need to go more frequently than you think is normal? Can your child delay urination for a period of time after sensing the urge without having an accident?
3. Does your child complain that it doesn't feel like he or she has completely emptied his or her bladder when finished?
4. Does your child ever complain of burning when he or she urinates? Have you ever noticed any irritation around the end of his penis or her meatus?
5. Has your child ever had a work-up for a urinary tract infection or any other urinary problem?

Encopresis
1. How often does soiling happen? Does it occur at the same time each day?
2. Describe the consistency of accidents and bowel movements (e.g., hard/pebbles, soft, runny).
3. How often does your child have a bowel movement? How long has this pattern been present?
4. When your child has a bowel movement, does it smell worse than it should?
5. Does your child have a history of painful bowel movements?

components of encopresis (i.e., constipation), behavioral interventions typically require implementation for a period of time before improvement is observed. However, understanding that signs of progress may be apparent even before a decrease in the frequency of accidents is evident can assist the clinician in offering guidance to children and families. For example, a study using measures of the size of urine spots, instead of the more conventional counts of wet versus dry nights, showed that urine-alarm treatment produced gradually but steadily shrinking urine spots (Ruckstuhl & Friman, 2003). This novel approach to assessing the effects of alarm treatment allowed researchers, parents, and their bedwetting children in treatment to readily observe the progress leading up to continence. There are often other signs of preliminary progress with both enuresis and encopresis prior to cessation of accidents, which are more subtle (e.g., forward movement of the urine accident in time, say from 10:30 pm to 1:30 am; increased frequency of bowel movements indicating successful treatment of constipation, while frequency of accidents remains unchanged), and thus, may require explanation from the clinician. The ability of a clinician to help youth and parents recognize and appreciate the signs of progress, despite continued accidents, is critical for ensuring persistence with treatment. This area of basic competence pulls from both the "knowing that" skills (i.e., staying abreast of research findings) and "knowing how" skills (i.e., being able to communicate findings in a clinically relevant and family-friendly manner).

8.4.2   Expert Competencies of the Clinician

Expert-level competency is easier to define than basic competency, because it is all inclusive and requires no complex philosophical distinctions. The expert knows how to fully describe enuresis and/or FE including, for example, the physiology of urination or defecation, prevalence

rates of urinary and/or fecal incontinence, the composition of comprehensive assessments, a broad range of treatment options and the relative levels of empirical support for them, the behavioral mechanisms underlying the effects of treatment, and the methods establishing and maintaining motivation to participate in treatment. More generally, the expert would be able to describe about all the information on enuresis and/or FE.

In addition to their ability to fully describe either or both conditions, the expert also knows how to conduct assessments and implement treatment, as well as how to train others in doing so. In other words, an expert clinician would have fully mastered the "knowing that" and "knowing how" skills, and can successfully implement both. Expert clinicians are able to easily transit between the roles of teacher (e.g., of medical students, graduate students) and provider working with families. As such, achieving expert competence in elimination disorders makes the practitioner highly desirable for a variety of contexts (e.g., medical school/university hospital, pediatric practice office, private practice).

Finally, owing to the broad range of verbal- and performance-based knowledge of incontinence, the expert is also able to consult to relevant research programs or conduct them himself or herself. As expert competence would include fluency in both biomedical and psychosocial aspects of elimination disorders, the expert focused on a scientific perspective may be well prepared to expand the scientific basis for the biobehavioral perspective on incontinence. While much research has been conducted in the area of elimination disorders, particularly with NE, still much remains to be investigated (e.g., treatment options for individuals who fail to respond to established treatments; treatment preferences of families and children; models of treatment delivery that lead to optimal outcome, such as pediatric primary care versus specialty care). Thus, novice child psychologists could establish a pediatric dimension to their careers by developing expertise in elimination disorders, as this area presents rich opportunities for clinical and/or scientific contributions.

8.5   Elimination Disorders: Transition from Basic Competence to Expert

While the specific pathophysiology and behavioral variables affecting enuresis and encopresis are different, the process of transitioning from basic to expert competence is similar for both the conditions. That is, to establish basic competence for both the conditions, one needs to develop a full appreciation and understanding of the combined biobehavioral aspects, become comfortable in behavioral strategies for supporting medical recommendations (e.g., addressing adherence, creating long-term maintenance plans), and be prepared to provide prescriptive interventions to address relevant treatment issues (e.g., parental use of punishment, child-generalized noncompliance). Clinicians for whom the goal is to establish basic competence in the treatment may wish to emphasize either "knowing how" or "knowing that" skills, based on their professional roles and likely interactions with the subject matter. For example, a university-based professor engaged in graduate training may emphasize on skills pertinent to effectively describing issues related to the assessment and treatment of elimination disorders. Emphasis on these skills is likely to result in successful training within a classroom environment. Conversely, a clinician working in a pediatric setting may chose to place emphasis on "knowing how" skills, and be less concerned with his or her ability to train others (beyond parents and families) in the care of youth with elimination disorders.

Establishing expert competence involves combining multiple skill sets related to (a) providing direct services to youth with elimination disorders, (b) consulting with others (e.g., medical professionals), (c) training the next generation of psychologists and other health-care providers (e.g., medical students) to provide appropriate care, and (d) conducting research on issues pertinent to the care of youth with elimination disorders. Achieving successful expert competence is demanding and is probably influenced by a variety of factors (e.g., working in a setting that supports endeavors in all arenas). Further, establishing expertise in this area is likely to require the pursuit of specialized education beyond that typically offered in psychology graduate training programs. Thus, reviewing medically oriented journals, attending either specialized psychological or medical conferences, and establishing collaborative relationships with existing experts are all recommended for the transition from basic to expert competence.

8.6   Summary

Elimination disorders are a prevalent concern for many children, and persistent elimination problems are often associated with a significant amount of distress for children and their families (e.g., Van Tijen et al., 1998). Increasing number of child psychologists with biobehavioral expertise in the assessment, treatment, and scientific study of enuresis and FE would correspondingly increase the probability that the psychosocial dimensions of both the conditions would be successfully addressed in practical settings and productively studied in research settings. The biomedical aspects of both the conditions have been reasonably well understood and competently addressed in the medical settings for many years. The psychosocial aspects, however, have often been misunderstood and undertreated, overtreated, and unfortunately, mistreated, even in the professional settings, and the gap in the knowledge and expertise underlying this state of affairs has only recently begun to be filled. Psychologists with basic and expert level of biobehavioral competencies are not only important, but are actually necessary to advance this progress, so that it parallels the success already obtained in the biomedical domain.

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9 Tic and Habit Disorders

Christine A. Conelea · Benjamin T. P. Tucker · Douglas W. Woods

Abstract: Repetitive behavior disorders, including tic and habit disorders, are thought to be relatively common among children and adolescents. Tic disorders are characterized by repetitive, sudden movements and/or vocalizations that are seemingly purposeless in nature. Habit disorders are typified by repetitive behaviors focused on the body and include trichotillomania, skin picking, nail biting, thumb sucking, and cheek chewing. Although these disorders may in some cases be benign and short-lived, clinical attention may be needed for children experiencing psychosocial impairment, physical damage, or emotional distress. The current chapter provides an overview of these disorders, their diagnostic assessment, and their purported etiology. Next, evidence-based psychosocial treatments for tic and habit disorders are described. The final portion of the chapter discusses the basic and expert clinician competencies needed to treat tic and habit disorders. Basic competencies include the ability to accurately implement function-based interventions and Habit Reversal Therapy, while expert competencies generally involve the ability to modify treatment for complex or non-responsive cases. The chapter concludes with suggestions to aid a clinician in the transition from basic to expert competence.

9.1 Overview

9.1.1 Tic Disorders

Tic disorders are characterized by repetitive, sudden, and seemingly purposeless motor movements and/or vocalizations. Tics can range from simple behaviors that go unnoticed by the casual observer (e.g., forceful eye blinks or throat clearings) to highly conspicuous and complex vocal and motor patterns (e.g., complete words and phrases or complex hand gestures). Tics are commonly found in pediatric populations, with recent epidemiological studies finding tics in 17–21% of children (Kurlan et al., 2002; Peterson, Pine, Cohen, & Brook, 2001). Estimates of the prevalence of Tourette Syndrome (TS), the most severe tic disorder diagnosis, are relatively varied. However, recent research indicates a prevalence of 0.15–1.1% in school-aged children, and a male to female ratio of 4:1 to 6:1 (Coffey et al., 2000; Kadesjö & Gillberg, 2000).

Tic disorders typically develop during early childhood and tend to follow a waxing and waning course, with symptom characteristics changing over time. The onset usually occurs between the ages of 5 and 8 years (Jagger et al., 1982; Leckman, King, & Cohen, 1999; Peterson et al., 2001). Simple motor tics in the head and face region usually appear first, and may be followed by the development of motor tics in the mid-section and extremities, vocal tics, and complex tics (Jagger et al.; Leckman et al., 1999). Also, most children eventually develop bodily sensations (i.e., premonitory urges) preceding their tics, which may be relieved upon tic occurence (Leckman, Walker, & Cohen, 1993; Woods, Piacentini, Himle, & Chang, 2005). Symptoms tend to reach peak severity around the ages of 10–12 years, followed by a steady decline and minimal symptoms as the adolescent reaches adulthood (Bloch et al., 2006; Coffey

et al., 2000; Leckman et al., 1998). Adults who retain TS diagnostic status tend to be the most severe patient population (Leckman et al., 1999).

Children with tic disorders often experience impairment in psychosocial functioning and psychiatric comorbidity. Obsessive-compulsive disorder (OCD), attention-deficit/hyperactivity disorder (ADHD), anxiety, mood, and disruptive behavior disorders commonly co-occur and are more likely to be seen in children with tic disorders than those without (Kadesjö & Gillberg, 2000; Kurlan et al., 2002). Presence of comorbidities contributes significantly to negative psychosocial outcomes, but the tics themselves also have been found to be related to negative peer perceptions, poorer social desirability, more negative family functioning, and lower academic performance (e.g., Boudjouk, Woods, Miltenberger, & Long, 2000; Packer, 2005; Stokes, Bawden, Camfield, Backman, & Dooley, 1991; Wilkinson et al., 2002; Woods, 2002).

9.1.2   Habit Disorders

Habit disorders are characterized by body-focused repetitive behaviors (BFRBs), such as hair pulling, skin picking, nail biting, thumb sucking, and cheek chewing. With exception of hair pulling, which may be diagnosed as trichotillomania (TTM), formal diagnostic categories for most BFRBs do not exist and are usually considered stereotypic movement disorders (SMD).

The BFRBs appear to be relatively common among children and adolescents. In many children, these behaviors can be relatively benign and short-lived. However, others will experience significant physical and psychological impairment. Prevalence estimates of BFRBs in children are relatively sparse and mostly limited to hair pulling. An epidemiological study of hair pulling among youth found a lifetime prevalence of 1% and current hair pulling in 0.5% (King, Zohar et al., 1995). It has been suggested that 20–60% of post-preschool age children bite their nails (Friman, Byrd, & Oksol, 2001). In adults, pathological skin picking has been found in approximately 2% of dermatology patients (Griesemer, 1978) and 4% of college students (Bohne, Wilhelm, Keuthen, Baer, & Jenike, 2002; Keuthen et al., 2000). However, skin picking has been relatively under-studied in child populations.

Retrospective reports by adults with BFRBs indicate a typical onset during childhood. The average age of onset for TTM is in early adolescence (around the ages of 12 and 13 years; Christenson, Mackenzie, & Mitchell, 1991; Cohen et al., 1995) and is 15 years for skin picking (Wilhelm et al., 1999). Adults with other BFRBs also report onset during childhood (Croyle & Waltz, 2007). However, these behaviors may begin at any age, with reports ranging from <1 year to late adulthood (Christenson et al., 1991).

The BFRBs can cause significant tissue damage (e.g., skin lesions and hair loss) as well as impairment in functioning and quality of life. Individuals with BFRBs commonly report elevated levels of depression, anxiety, and stress; and low self-esteem, shame, and impairment in social, home, and occupational functioning (Croyle & Waltz, 2007; du Toit, van Kradenburg, Niehaus, & Stein, 2001; Flessner & Woods, 2006; Stemberger, Thomas, Mansueto, & Carter, 2000; Woods et al., 2006). Those presenting with pathological BFRBs commonly meet the criteria for additional psychiatric diagnoses. Depression, anxiety, substance-use disorders, eating disorders, body-dysmorphic disorder, and personality disorders are the most common (Christenson, 1995; Christenson et al., 1991; Wilhelm et al., 1999). Little is known about

comorbidity in children with BFRBs. However, small clinical samples of children with TTM have identified comorbid psychiatric conditions in the majority of subjects, with depression, anxiety, and disruptive behavior disorders being especially common (Hanna, 1997; King, Scahill et al., 1995; Reeve, Bernstein, & Christenson, 1992).

9.2 Recognition of Symptoms and Their Assessment

A comprehensive clinical assessment of tic and habit disorders includes gathering information (a) for differential diagnosis, (b) to describe symptom topography, (c) to ascertain maintaining factors, (d) to determine functional impact, and (e) to examine possible comorbid conditions.

9.2.1 Tic Disorders

The DSM-IV-TR (American Psychiatric Association, 2000) includes four tic disorder diagnoses: TS, chronic motor or vocal tic disorder (CMTD, CVTD), transient tic disorder (TTD), and tic disorder not otherwise specified (TDNOS). TS is characterized by the presence of at least two motor tics and at least one vocal tic at some point during the client's life, with daily or intermittent occurrence for more than 1 year, during which there may not be a tic-free period lasting for more than 3 consecutive months. The onset must occur before the age of 18 years. Criteria for CMTD and CVTD are identical to TS, except that only motor or vocal tics, but not both, are present. TTD may be diagnosed if tics occur many times a day, nearly everyday for at least 4 weeks, but no longer than 12 months. TDNOS is reserved for presentations that do not meet the criteria for a specific tic disorder (e.g., onset after the age of 18 years or tics lasting less than 4 weeks; American Psychiatric Association).

In conducting a differential diagnosis, the clinician should be aware of conditions that have presentations similar to tic disorders. For instance, symptoms of OCD can resemble complex tics (e.g., repetitive touching and tapping). In these cases, it is important to determine whether significant anxiety and obsessions (e.g., a feared consequence for not performing the behavior) precede the target behavior, in which case, the movement or vocalization may be a symptom of OCD. A SMD may also appear similar to a tic disorder and should be considered if a pervasive developmental disorder is also present and/or the movements appear rhythmic, intentional, and self-soothing. In some cases, it will be necessary to refer the client to a neurologist or psychiatrist to rule out alternative neurological conditions (e.g., Sydenham's chorea or Huntington's disease) causing the movements suspected as tics.

The clinician should list each tic and gather detailed information on its topography, frequency, intensity, functional interference, controllability, and associated premonitory urge phenomena. The use of self-report instruments (e.g., The Yale Tourette Syndrome Symptom List-Revised; Cohen, Detlor, Young, & Shaywitz, 1980; The Parent Tic Questionnaire; Chang, Himle, Tucker, Woods, & Piacentini, in press; The Premonitory Urge for Tics Scale; Woods et al., 2005) and semistructured clinical rating scales (e.g., The Yale Global Tic Severity Scale; Leckman et al., 1989) can facilitate this process and should be delivered throughout the course of treatment. The clinician should also conduct a functional assessment by interviewing the child and the parent/guardian regarding environmental antecedents and consequences

(e.g., parental reaction to tics and stressful and anxiety-provoking situations) that may play a role in tic maintenance. A thorough diagnostic assessment of other psychiatric disorders should be included, because frequently comorbid conditions (e.g., disruptive behavior disorders, ADHD, and anxiety) can be more impairing than the tics themselves (Kadesjö & Gillberg, 2000).

9.2.2 Habit Disorders

As discussed previously, the DSM-IV-TR does not include diagnoses for specific BFRBs, with the exception of hair pulling which may be diagnosed as TTM. Criteria for TTM include (a) recurrent pulling out of one's hair causing noticeable hair loss; (b) an increased sense of tension immediately before pulling or when attempting to resist pulling; (c) pleasure, gratification, or relief during pulling; (d) the behavior not better explained by another mental disorder (e.g., OCD or a psychotic disorder) or medical condition (e.g., alopecia); and (e) the pulling that causes clinically significant distress or impairment (American Psychiatric Association, 2000). However, in the case of a child, a diagnosis may still be warranted even in the absence of criteria (b) and (c), because a young client may be unable to verbalize these feelings, and a large percentage of youngsters with significant hair pulling do not report associated tension and/or gratification (American Psychiatric Association; Hanna, 1997). A SMD diagnosis should be considered for patients presenting with other BFRBs. The essential features of a SMD are a repetitive, seemingly driven, nonfunctional motor behavior that interferes with functioning or causes physical injury requiring treatment (American Psychiatric Association). If mental retardation is also present, the behavior must be severe enough to become a focus of the treatment (American Psychiatric Association). Again, one should also rule out other medical or psychiatric conditions as the cause of the behavior or the observed tissue damage. Other possible psychiatric diagnoses to consider include body dysmorphic disorder, psychotic disorder, and OCD.

Prior to beginning treatment, it is essential that the clinician gathers detailed information on the topography of the BFRB, severity of symptoms, and environmental antecedents and consequences. It is helpful to establish operational definitions of the BFRB by asking the client to describe the ways in which they perform the behavior (e.g., the use of fingernails to pick skin, or tweezers to pull hair) and the bodily location(s) on which it occurs. Measures of symptom severity should also be taken throughout the course of treatment to evaluate treatment progress. However, to date, the only severity measure for child and adolescent populations with acceptable psychometric characteristics is the Trichotillomania Scale for Children, which includes a child- and parent-report version (TSC; Tolin et al., 2008). A detailed functional assessment of the BFRB of interest should be conducted to facilitate treatment planning. Furthermore, detailed information should be gathered on the environmental situations and internal events (e.g., body-related cognitions or negative affect) that precede the target behavior as well as its consequences (e.g., reduction of negative affect affect or pleasurable bodily stimulation). It is also important to examine the areas of life impacted by the behavior (e.g., impairment in home and school responsibilities, peer relationships, and general well-being and quality of life). Finally, a thorough assessment of possible comorbid disorders should be included, since, like tic disorders, symptoms of other disorders (e.g., depressive symptoms) may be more impairing than the habit itself (Diefenbach, Tolin, Hannan, Crocetto, & Worhunsky, 2005; Keuthen et al., 2004).

9.3 Maintenance Factors of the Disorder or Problem

9.3.1 Tic Disorders

Symptoms of tic disorders are maintained by both underlying neural dysfunction and environmental antecedents and consequences that develop tic-controlling properties (Himle, Woods, Piacentini, & Walkup, 2006).

Research on the biological bases of tic disorders has focused primarily on the role of cortical-striato-thalomo-cortical (CSTC) circuits and the neurotransmitter dopamine (DA). The CSTC circuits are involved in the planning, modification, and initiation of motor movements, and the involved brain structures communicate through DA and other neurotransmitters, such as glutamate and gamma-aminobutyric acid (GABA). It has been proposed that tic disorders arise and persist because of excessive excitation and decreased inhibition in cortical regions involved in CSTC circuits and increased DA production and receptor sensitivity (see Leary, Reimschisel, & Singer, 2007 for a review).

Tics arise from dysfunction in these brain structures and neural circuits and may be influenced and partially maintained by internal and external environmental events and consequences. Perhaps, the most frequently examined environmental factor in the maintenance of tic disorders is the premonitory urge. Premonitory urges seem to develop after the initial appearance of tics (Leckman et al., 1993) and may eventually develop controlling properties over the tics themselves, as the reduction or removal of the urge following a tic can function as a negative reinforcer (Himle et al., 2006; Woods et al., 2005). As will be discussed later in this chapter, decreasing the premonitory urge's control over tics potentially is an important mechanism of change in successful behavioral treatment.

A number of other environmental antecedents and consequences seem to play a role in the waxing and waning pattern of tic disorders, and to a certain extent, the maintenance of the disorder itself. Antecedent variables such as presence of others, social situations, tic-related talk, and emotional distress have all been associated with increases in tics (O'Connor, Brisebois, Brault, Robillard, & Loiselle, 2003; Silva, Munoz, Barickman, & Friedhoff, 1995; Watson & Sterling, 1998; Woods, Watson, Wolfe, Twohig, & Friman, 2001). Consequence variables such as social attention and tangible reinforcers have also demonstrated controlling properties over tic frequency (Watson & Sterling, 1998; Woods & Himle, 2004).

9.3.2 Habit Disorders

Less is known about the etiology of habit disorders than that of tic disorders. However, like tic disorders, BFRBs seem to be maintained by environmental antecedents and consequences. Mansueto, Stemberger, Thomas, and Golomb (1997) have proposed a behavioral model of TTM, in which conditioned stimuli associated with the urge to pull, discriminative stimuli for pulling itself, various behaviors associated with pulling, and reinforcing consequences for pulling all play a role in TTM maintenance. Many of these factors have been supported by subsequent research and seem to play a role in the persistence of TTM and other BFRBs.

Most attention has been given to the reinforcing effects of BFRBs and their role in the persistence of the behavior. Research using both self-report and experimental designs has suggested that BFRBs often result in decreased tension, anxiety, and boredom (Diefenbach,

Mouton-Odum, & Stanley, 2002; Diefenbach, Tolin, Meunier, & Worhunsky, 2008; Wilhelm et al., 1999). Other researchers have emphasized the role of positively reinforcing consequences in BFRBs. Individuals often report increased pleasure and satisfaction while engaging in a body-focused habit (Diefenbach et al., 2008; Wilhelm et al., 1999), and subsequent behaviors such as manipulating pulled hair with one's hands or mouth can be positively reinforcing (Mansueto et al., 1997; Rapp, Miltenberger, Long, Elliot, & Lumley, 1998). The tendency to perform BFRBs in a conscious, goal-directed manner (e.g., to achieve a reinforcing consequence) has been termed "focused" pulling/skin picking (Christenson et al., 1991; du Toit et al., 2001; Flessner et al., 2007; Walther, Flessner, Conelea, & Woods, 2009).

The BFRBs can also be maintained owing to their occurrence outside of one's awareness. It is quite common for sufferers to report engaging in the behavior while distracted by a different activity (e.g., reading or watching TV) and realizing what has been done only after seeing the product of the behavior (e.g., the accumulation of pulled hair). This behavioral style has been termed "automatic" pulling/picking, and the extent to which automatic pulling/picking occurs varies across individuals (Christenson et al., 1991; du Toit et al., 2001; Flessner et al., 2007; Walther et al., 2009).

9.4   Evidence-Based Treatment Approaches

9.4.1   Tic Disorders

Although the mainstay of tic disorder treatment is pharmacotherapy, a growing body of support exists for psychosocial treatments, particularly Habit Reversal Training (HRT). There is also limited support for the use of an adapted version of Exposure and Response Prevention (ERP).

HRT is a multicomponent behavioral treatment package designed to (a) increase the client's ability to detect tics and their warning signs; (b) teach the client a behavior that is incompatible with the tic (i.e., a competing response) that can be performed following a tic or a warning sign; (c) enhance motivation to practice the techniques and recruit social support; and (d) provide for the generalization of tic awareness and competing response performance to the everyday environment (Azrin & Nunn, 1973). Commonly used techniques include awareness training, self-monitoring, competing response practice, relaxation training, contingency management, and tic inconvenience reviews (Azrin & Nunn, 1973; Azrin & Peterson, 1990; Wilhelm et al., 2003; Woods et al., 2008). HRT also includes psychoeducation about tic disorders and function-based interventions designed to target antecedents and consequences to the tics (Woods et al.).

HRT and simplified forms involving at least awareness training, competing response training, and social support (Miltenberger, Fuqua, & McKinley, 1985; Woods et al., 1996) have demonstrated considerable effectiveness as treatments for tic disorders (Himle et al., 2006). Studies utilizing single-subject experimental designs (multiple baselines or alternating treatments) and direct observation as outcome measures have shown mean decreases in tic frequency ranging from 38% to 96% posttreatment, and maintenance of treatment gains for the majority of subjects at follow-up (see Himle et al. for a review). In single-subject studies of HRT for children with tics, large reductions at posttreatment and follow-up have been observed in vocal tics (Woods & Twohig, 2002; Woods, Twohig, Flessner, & Roloff, 2003)

and motor tics (Azrin & Peterson, 1989; Finney, Rapoff, Hall, & Christophersen, 1983; Miltenberger et al., 1985).

Several studies utilizing randomized controlled group designs have shown HRT to be superior to several control conditions including wait-list (Azrin & Peterson, 1990), negative practice (Azrin, Nunn, & Frantz, 1980a), and supportive psychotherapy (Deckersbach, Rauch, Buhlmann, & Wilhelm, 2006; Wilhelm et al., 2003). Cook and Blacher (2007) recently conducted an analysis of the empirical literature on psychosocial treatments for tic disorders (consisting of studies using either single-subject or randomized controlled trial designs) and concluded that HRT could be considered a well-established treatment according to the criteria established by the American Psychological Association Task Force for Promotion and Dissemination of Psychological Procedures (1995) (Chambless et al., 1998).

ERP has also shown promise as a treatment for tic disorders. It is most typically used as a treatment for OCD and involves repeatedly exposing the patient to his/her obsessions, while preventing the performance of neutralizing compulsions. Given the frequent co-occurrence of OCD and TS, and similarities in the functional relationship between obsessions and compulsions to that of premonitory urges and tics, ERP has been adapted as a treatment for TS. In this approach, the client is exposed to the premonitory urge sensations that precede his/her tics and must prevent the occurrence of tics, in the hope that habituation to the premonitory urge will occur and result in subsequent reductions in tic frequency.

In a recent outcome study, Verdellen, Keijsers, Cath, and Hoogduin (2004) compared HRT to ERP in 43 participants with TS (aged 7–55 years). HRT and ERP were found to produce equivalent reductions in both objective measures of tic frequency and tic severity scores. The results of this study indicate that ERP can be considered as a *probably efficacious* intervention for tic disorders that warrants further investigation and independent replication (Cook & Blacher, 2007).

9.4.2   Habit Disorders

Although the treatment outcome literature for habit disorders is under-developed when compared to that of tic disorders, especially among child and adolescent populations, a few approaches have shown promise. The approach most frequently examined and with the strongest empirical support is HRT. There is also growing evidence to support the use of a combination of acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 1999) and HRT for BFRBs (Twohig & Woods, 2004; Woods & Twohig, 2008; Woods, Wetterneck, & Flessner, 2006).

HRT for BFRBs was also developed by Azrin and Nunn (1973); it follows the same general protocol as HRT for tic disorders. Patients are taught to recognize the behavior and its warning signs as they occur and to perform a competing response. Social support, psychoeducation, and function-based interventions are also important components.

The outcome studies generally support HRT's effectiveness for a range of BFRBs. Early group studies compared HRT with negative practice for the treatment of TTM (Azrin, Nunn, & Frantz, 1980b), nail biting (Azrin, Nunn, & Frantz, 1980c), and other oral habits (e.g., lip biting and chewing; Azrin, Nunn, & Frantz-Renshaw, 1982). In each report, HRT outperformed negative practice. More recent outcome studies have also shown positive results for HRT. Twohig, Woods, Marcks, and Teng (2003) conducted a trial comparing HRT with a

placebo control for the treatment of nail biting. Significantly greater increases in nail length were observed at posttreatment and follow-up in the HRT group than in the placebo control group. Also, a recent trial compared HRT for skin picking with a wait-list control condition, and found a significantly greater decrease in self-reported skin-picking episodes and independent ratings of physical damage in the HRT group, with maintenance of gains at follow-up (Teng, Woods, & Twohig, 2006). Also of note, van Minnen, Hoogduin, Keijers, Hellenbrand, and Hendriks (2003) conducted a randomized controlled trial comparing behavior therapy, fluoxetine, and wait-list control in patients with TTM. The results demonstrated significantly greater reductions in symptom severity in the behavior therapy group when compared with the fluoxetine group and the wait-list control group. Importantly, the behavior therapy condition largely consisted of techniques commonly used in HRT (e.g., self-monitoring, stimulus control, and incompatible responses). Controlled group studies of behavioral treatments for BFRBs in children are quite limited. However, in a recent open trial of Cognitive Behavioral Therapy (consisting of HRT components, cognitive restructuring, and relapse prevention) for pediatric TTM, decreases in pulling severity at posttreatment and follow-up were observed, with the majority of subjects being identified as treatment responders (Tolin, Franklin, Diefenbach, Anderson, & Meunier, 2007).

There has been recent interest in combining HRT with ACT as a treatment for TTM. ACT seeks to decrease the influence of aversive internal states on behavior through techniques designed to increase one's ability to accept rather than avoid or deliberately alter these experiences. Because pulling is often performed to manage negative affect or reduce an urge (Christenson, Ristvedt, & Mackenzie, 1993), incorporating techniques to promote the acceptance of urges or feelings into HRT may improve treatment effectiveness. A recent trial compared HRT plus ACT to a wait-list control condition, and found significantly greater reductions in pulling severity, anxiety, and depression in the treatment group (Woods et al., 2006). This combined treatment package has also demonstrated effectiveness in the majority of subjects in single-subject experimental studies for both TTM (Flessner, Busch, Heideman, & Woods, 2008; Twohig & Woods, 2004) and skin picking (Flessner et al., 2008). There is some evidence to suggest that ACT without HRT may be a promising treatment for BFRBs (Twohig, Hayes, & Masuda, 2006), but further investigation is needed. It is also important to note that the ACT plus HRT treatment package is yet to be investigated in pediatric populations.

9.5   Mechanisms of Change

9.5.1 Tic Disorders

Behavioral treatments for tic disorders are effective, and several hypotheses have been proposed regarding the mechanisms through which they have their effect. Although no outcome studies have directly examined potential mediators using established data analytic techniques (see Baron & Kenny, 1986), indirect evidence from treatment trials, laboratory experiments, and correlational studies suggest several potential mediating variables.

A functional magnetic resonance imaging study of tic suppression (Peterson et al., 1998) provides clues regarding the possible role of CSTC circuits in mediating response to behavioral treatments. In this study, significant changes in activation were observed in several brain regions involved in CSTC circuits during a tic suppression task. These findings suggest that

effective behavioral treatment incorporating tic suppression training (i.e., HRT) could exert its effect by producing changes in brain activity in regions implicated in voluntary tic suppression. Another important proposed mechanism of change is habituation to the premonitory urge. Tics appear to be maintained partially by the negatively reinforcing effect of their removal or reduction of the premonitory urge (Himle, Woods, Conelea, Bauer, & Rice, 2007). Therefore, decreasing the premonitory urge's control over tics may be an important mediator of successful behavioral treatment. In support of this hypothesis, ERP, the behavioral treatment of choice for OCD, whose effects seem to be due to habituation to the anxiety response (Grayson, Foa, & Steketee, 1982), may also be effective in tic disorders (Verdellen et al., 2004). It has also been demonstrated that subjective ratings of urge severity decrease both within and between ERP sessions, suggesting that habituation to the urge may be a mechanism of change in behavioral treatment (Verdellen et al., 2008).

9.5.2 Habit Disorders

Although behavioral treatments for BFRBs appear to be quite effective, little is known about the factors that may mediate their effect. However, as is the case in tic disorder, indirect evidence from several lines of research has implicated some candidates for a mechanism of change.

One possible mechanism of change in BFRB treatment is reduction of experiential avoidance. Experiential avoidance is a behavioral tendency to avoid unpleasant internal states and is believed to be a common maintaining factor in many psychiatric disorders (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). BFRBs are often performed to reduce aversive feelings (Christenson et al., 1993; Diefenbach et al., 2002, 2008; Walther et al., 2009; Wilhelm et al., 1999), suggesting that experiential avoidance may play a role. In support of this proposition, research has shown that experiential avoidance is positively correlated with symptom severity (Begotka, Woods, & Wetterneck, 2004) and may mediate the effect of negative cognitions on pulling (Norberg, Wetterneck, Woods, & Conelea, 2007). Furthermore, in subjects treated with ACT plus HRT, decreases in pulling severity were moderately correlated with decreases in experiential avoidance (Woods et al., 2006). Despite these preliminary supportive findings, the experiential avoidance hypothesis needs to be tested using more methodologically rigorous studies.

Another possible mechanism of change is increased awareness of the BFRB. As mentioned previously, BFRBs are often performed without the patient's knowledge while he/she is distracted by another activity. A major goal of HRT is to increase awareness of the behavior, which may be an important mechanism of change for those who engage in the habit in a more "automatic" fashion.

9.6 Basic Competencies of the Clinician

In addition to nonspecific therapeutic skills central to all behavioral interventions, the basic competencies needed by a clinician treating TS and BFRBs include providing a treatment rationale, delivering psychoeducation, conducting a functional assessment and implementing function-based interventions, conducting HRT, assigning homework, maintaining motivation,

and taking care to prevent relapse. A list of both basic and expert competencies associated with behavioral treatment of TS and BFRBs is provided in ◉ Table 9.1.

Providing a treatment rationale. Client expectations should be addressed at the onset of therapy. Given the chronic nature of TS and its waxing and waning symptom pattern, clinicians working with this population should ensure that the child and parent have a reasonable picture of "treatment success." Within the treatment rationale, clinicians should emphasize that HRT aims to help the child learn to manage tics to his/her satisfaction rather than to "cure" tics. It may also be beneficial to help the client attribute gains to the treatment, as some clients may have the tendency to attribute symptom reduction to natural waning or other extraneous situations (e.g., less stress during a summer vacation).

The treatment rationale provides the client with information regarding the two major features of treatment: function-based interventions and competing response training. When presenting the rationale for function-based interventions, clinicians should ensure that the client understands the treatment well, and in part, focus on modifying the client's environment to help reduce the likelihood of the behavior and/or its impact. The clinician should explain that the treatment, particularly the competing response, is designed to help the client manage symptoms rather than completely eliminate them (particularly in the case of tics).

A metaphor can sometimes help children and their families understand the rationale better. For example, many children are familiar with asthma, so the clinician can explain that a competing response is a tool used to manage tics/habits, just like an inhaler used as a tool to manage asthma symptoms. To parallel the function-based intervention component, the clinician could point out that children with asthma also try to change situations to make their symptoms less likely to happen (e.g., stay away from allergens, avoid too much exertion, try to stay relaxed). Using such a metaphor can also help to normalize and destigmatize the child's experience and help them to be more willing to engage in treatment.

Psychoeducation. Often, children and their parents seek information about the disorder. Also, clients often come to treatment with inaccurate information obtained through hearsay or unreliable sources on the internet. Psychoeducation is designed to address these issues and can

◉ **Table 9.1**

Basic and expert clinician competencies associated with the treatment of tic and habit disorders

Basic competencies	Expert competencies
• Provide the treatment rationale • Provide accurate psychoeducation about tic disorders and BFRBs • Conduct a functional assessment • Design and implement function-based interventions • Implement core HRT procedures, including awareness training, competing response training, and social support • Assign homework • Maintain motivation and reduce noncompliance • Establish procedures to prevent relapse	• Adapt treatment to meet the needs of children with commonly occurring comorbid disorders (e.g., ADHD, OCD, ODD, PDD) • Address compliance difficulties related to the premonitory urge • Enhance awareness training for those with limited awareness of the target behavior • Troubleshoot client complaints related to competing response procedures • Apply HRT to complex tics • Address BFRBs that occur at night or during sleep • Ensure generalization of treatment gains to multiple settings

help to address issues of stigma and anxiety related to the child's diagnosis by normalizing the child's and family's experiences.

Before implementing psychoeducation, clinicians should have sufficient understanding of tic and habit disorders. Basic psychoeducation competencies include being able to describe and/or answer questions about the definition of a disorder and its differences from other diagnoses, etiology, common symptoms and phenomenology, prevalence, commonly co-occurring difficulties or disorders, course, and prognosis. Psychoeducation can also be used to inform the family about outside resources, such as national organizations or local patient support groups, or to dispel myths related to the disorder (see Woods, Conelea, & Walther, 2007). Clinicians can access psychoeducation information by reading relevant research studies, review articles, or books (e.g., Swain, Scahill, Lombroso, King, & Leckman, 2007; Woods & Miltenberger, 2001; Woods, Piacentini, & Walkup, 2007). The clinicians can also access information on support group websites designed to educate treatment providers (TS: www.tsa-usa.org; Trichotillomania: www.trich.org).

Functional assessment and function-based interventions. Functional assessments are interviews conducted with the goals of operationally defining the target behavior; predicting the situations, settings, or times when the target behavior is most likely to occur; and identifying behavioral functions that may maintain or exacerbate expression of the behavior (Kratochwill & McGivern, 1996).

Creating operational definitions of the child's tics/habits is an important step early in the treatment. This step aids the clinician in the functional assessment process and may begin to enhance awareness by encouraging the child and parents to understand the behavior in greater detail. Clinician skills needed for this step include being able to generate detailed and comprehensive definitions that include antecedent and consequent phenomenological events, balance perceptions of the behavior that may differ between parent and child, and identify behaviors that the family may not be aware of (especially in the case of TS). For those with TS, it can be beneficial to adopt a child's name for his/her own tics to help the child feel more comfortable describing or modeling them.

In the case of children with TS or multiple habits, hierarchies based on symptom distress are usually created to aid in treatment planning. Subsequently, HRT can be implemented for the child's most distressing symptom first as a way to reduce functional impairment or interference. If hierarchies are used, the clinician should be able to help the child quantify the distress associated with each symptom. In addition, if the clinician is able to determine the reasons for the child's distress (e.g., peers teasing the child), the clinician may also identify additional areas for intervention (e.g., peer education).

After defining the tics, the clinician should conduct a functional assessment interview. Competent clinicians should be familiar with the behavioral principles on which functional assessments are based, such as positive and negative reinforcement, stimulus control, and broader motivating factors. Clinicians should be able to apply this basic knowledge to identify possible antecedent factors that precipitate the behavior as well as the potential maintaining consequence variables. In cases where hypothesized maintaining factors can be re-created in session, the therapist may want to use functional analytic techniques to verify the effect of those factors by observing them directly. Familiarity with functional assessment and analysis procedures can be gained by reading general information about these procedures (e.g., mini-series edited by Neef & Iwata, 1994; Mace, Lalli, & Lalli-Pinter, 1991) and their use specifically in relation to TS and TTM (Miltenberger, Woods, & Himle, 2007).

After relevant antecedent and consequence variables have been identified, the clinician should use this information to develop function-based interventions. Function-based interventions generally fall into one of two categories (Newcomer & Lewis, 2004). First, for behaviors that are maintained by factors that are difficult to manipulate, intervention consists of teaching the child a functionally equivalent behavior as an alternative to the target behavior. HRT itself is built to address this function by teaching the use of a competing response as an alternate to the tic/habit. Second, when a functional assessment identifies contextual variables that exert stimulus control over the target behavior, interventions are designed to make changes specific to those variables. Woods et al. (2008) outlined five principles that clinicians can use to guide the development of function-based interventions. First, situations or settings associated with increases in the target behavior should be eliminated or minimized if possible. Second, maintaining events that follow occurrences of the target behavior should be eliminated, such as parent comfort or excusal from homework. Third, children should be reminded to use competing responses when situations associated with target behavior increases. Fourth, the child should be taught strategies (e.g., stress-reduction techniques) to minimize emotional reactions that may contribute to an increase in the target behavior. Fifth, the impact of the tic/habit on the child should be minimized. For example, the child's peers could be educated about the child's condition to reduce teasing. In addition to following these principles, clinicians may find it beneficial to familiarize themselves with the types of interventions that are recommended for situations and settings commonly reported to exacerbate tics or habit behaviors (for a review of commonly reported tic-exacerbating factors, see Conelea & Woods, 2008a).

For example, in the case of TTM, clients often report that the bathroom mirror elicits the urge to pull hair. In this case, possible interventions could include limiting the child's time in the bathroom, dimming bathroom lights to make it harder to see individual hairs, putting a note on the mirror to remind the child to use a competing response, or asking the child to wear gloves while in the bathroom to make pulling more difficult. Clinicians can read published treatment literature to familiarize themselves with other examples of function-based interventions for TS (e.g., Carr, Sidener, Sidener, & Cummings, 2005; Woods et al., 2008), TTM (e.g., Rapp, Miltenberger, Galensky, Ellingson, & Long, 1999; Rothbaum, 1992; Woods & Twohig, 2008), and nail biting (e.g., Woods et al., 2001).

Core HRT skills. Core HRT skills include awareness training, competing response training, and social support.

Awareness training is used to enhance the child's ability to recognize the target behavior and its "warning signs," which can include urge sensations or movements preceding the behavior, such as raising the arm to start pulling. This segment of therapy is an interactive process that includes therapist modeling of the child's tics/habits. The child also practices identifying the target behavior and its preceding sensations. Occurrences of target behaviors that are not recognized by the client are pointed out by the therapist. During this process, sensitivity on the part of the clinician is needed to ensure that the child does not feel mocked or scrutinized. Depending on the age of the child, it may be appropriate to couch awareness training as a "game" that the child can "win" by catching his/her own or therapist-simulated target behaviors. Verbal praise for correctly identified target behaviors can often help children stay engaged in the activity and reduce discomfort related to the activity.

Although awareness training for tics often involves detection of the urge, it is important to note that the urge is not a universal phenomenon among those with TS or TTM. Research suggests that many children do not report experiencing an urge (Banaschewski, Woerner, &

Rothenberger, 2003), and this finding seems to be particularly true for children aged 10 years and younger (Woods et al., 2005). When children do not experience an urge, clinicians can focus awareness training entirely on recognizing other behaviors that tend to occur before the target behavior. For example, a child with a head-shaking tic may drop his/her chin slightly prior to a tic, or a child with TTM may engage in hair twirling or stroking prior to pulling. Clinicians can also direct more treatment efforts toward function-based interventions to reduce the likelihood of target behavior occurrences. Functional assessment results can also be used to recommend high-risk situations in which the child and parent can practice additional awareness training.

During *competing response training*, the clinician helps the child identify a behavior that is physically incompatible with the target behavior, maintainable for at least 1 min, socially inconspicuous, and compatible with the child's usual activities. A basic competency for HRT is familiarity with commonly recommended competing responses, as well as the ability to work with the child to design a competing response for a less common behavior (e.g., an atypical tic).

Treatment manuals included in the book edited by Woods and Miltenberger (2001) contain possible competing responses. For BFRBs, competing responses consist of behaviors that prevent or limit hand movements, such as making a fist while holding the hand to the side, crossing the arms, putting the hands in pockets, or grasping an object, such as a pencil or a toy. Competing responses for tics vary depending on the type of tic the child has. For example, the competing response for a tic involving head movements is contraction of the neck so that the head is tilted downward slightly, while the competing response for a leg movement tic would be pressing the feet flat against the floor. Descriptions of other competing responses can also be found in a paper by Carr (1995).

For children who experience an urge prior to their tic or habit, it is important for the clinician to monitor the child's experience of the urge during in-session competing response practice. The negative reinforcement hypothesis suggests that removal of the urge following the tic/habit negatively reinforces the behavior, making it more likely to occur in the future. Therefore, if a child's urge has not dissipated while he/she is holding the competing response, the procedure may not be effective. Clinicians can monitor urge intensity by asking the child for subjective ratings during competing response practice. In this way, the clinician can ensure the loss of urge before the child releases the competing response. It is often helpful for the clinician to provide encouraging statements when the urge is particularly aversive. Clinicians may also want to graph the child's urge experience to show the child that urge intensity can decrease on its own. Doing this across several trials may also help the child to see that urge intensity will decrease more quickly with additional practice.

For the *social support* component of HRT, clinicians can identify a person in the child's life who is able to reward the child for using competing responses and remind the child to use them when tics or habits go unnoticed. In most cases, the best candidate for this role is the parent. However, clinicians should attend to the relationship dynamics between the child and individuals in his/her social environment to ensure that appropriate support persons are selected. For example, if an adolescent and his parents frequently argue, it may be more beneficial to recruit a friend or sibling to serve in the support role. Modifications to social support procedures could also be made, such as asking the parents to only focus on helping the adolescent a few times per week or developing less invasive reminders, such as a hand signal or code word.

Homework. Homework in HRT consists of self-monitoring and competing response practice. Self-monitoring generally occurs prior to competing response development to enhance the child's awareness of the target behavior. Here, again, clinician's competency with functional assessment procedures can be beneficial, as the clinician can recommend that homework assignments be completed during times or situations in which tics/habits are most likely to occur. Once the child learns the competing response for the tic/habits, competing response practice can also occur during these high-risk times or situations.

Given the importance of homework in HRT, clinicians should be capable of creating manageable homework assignments, rewarding homework compliance, and dealing with homework noncompliance. For children who frequently do not complete homework assignments, clinicians can use behavioral reward programs or a problem-solving process to identify and reduce any barriers to completion. Clinicians should also attend to the demands being placed on the child to ensure that homework assignments are reasonable. Shaping procedures can be used to reinforce gradual improvements in compliance. If the child is having difficulty implementing the competing response outside of therapy sessions, the clinician can work closely with the social support person to ensure that competing response use is prompted and rewarded on a regular basis.

Maintaining motivation. As HRT for tics and BFRBs is difficult, it is often useful to have strategies in place to enhance motivation and reduce noncompliance. Behavioral reward programs are often for this purpose. In a typical reward program, target behaviors are identified with the help of the child and parents. Such behaviors typically include attending therapy sessions, participating during in-session activities, and completing homework assignments. Rewards are identified and linked to specific point values, which can be attained by engaging in clearly identified treatment-related behaviors. Should a child demonstrate noncompliance or motivational difficulties, adjustments to the reward system may be beneficial, such as giving the child rewards or points for successive approximations to the desired behavior. In order to decrease frustration that comes with attempting to alter long-standing behavior patterns, it is important that rewards be contingent upon the child's efforts and attempts to comply with the treatment, rather than on actual symptom reductions.

Relapse prevention. Given the chronic nature of TS and some BFRBs, relapse prevention is an important component of treatment. Clinicians should be able to discuss the likelihood of symptom relapses with the family and frame relapses as opportunities to focus on diligently using the tools learned throughout treatment. The clinician can help the family prepare for potential relapses by revisiting function-based recommendations and reminding the family that the situations previously identified as high risk are likely to be associated with symptom exacerbations in the future. The clinician should ensure that the parent and child are familiar with treatment procedures. Given the natural changes in tic repertoire that occur in TS, clinicians should ensure that the client is capable of developing competing responses for new tics that may emerge.

9.7   Expert Competencies of the Clinician

Expert clinician competencies in HRT generally involve the ability to treat more complex cases and adapt or modify treatment procedures when particular treatment components are problematic for a client.

9.7.1　Dealing with Complex Cases

Children with severe comorbid conditions or considerable diagnostic overlap are often more difficult to treat. A clinician working with these children needs to be well versed in diagnostic assessment and the subtle differences that distinguish one disorder for another.

OCD. A common example is the overlap with TS and OCD (Mansueto & Keuler, 2005). Some children with TS have repetitive behaviors that are difficult to categorize either as a complex tic or a compulsion, such as repeatedly tapping or touching objects, rewriting words, or stating particular phrases repeatedly. To distinguish between compulsive behavior and complex tics, it is important to keep in mind that tics and compulsions are distinguished not on the basis of their topography, but on the basis of their function. Compulsions often function to alleviate the worry or anxiety associated with an obsession and tend to be associated with cognitions about specific feared consequences. Tics, on the other hand, often function to alleviate a premonitory urge, which is a vague or transient somatic sensation. Expert clinicians should be able to make these diagnostic distinctions and plan treatment accordingly. Given that repetitive behaviors classified as compulsions rather than tics are likely to be more amenable to an ERP treatment approach than to an HRT approach, expert clinicians should also be competent in ERP.

ADHD. ADHD is also prevalent among children with TS and may warrant changes in the HRT protocol. For example, it is typically recommended that a child hold a competing response for at least 1 min. However, a child with ADHD, or even a young child, may find it difficult to hold the competing response for this duration. Therefore, it may be appropriate to ask the child to hold a competing response for a shorter duration. Although the effect of this modification on the outcome has not yet been studied empirically, it may at least help to bolster compliance by making the treatment more manageable for the child. A child with ADHD may also have difficulty staying on task during the session or completing homework as assigned. Clinicians may also implement a behavioral reward system to reward the child for staying on task during smaller intervals of the session or for approximations of homework completion. Behavior modification techniques that have been shown to be effective for children with ADHD (Chronis, Jones, & Raggi, 2006) could also be used by the therapist in session, as well as taught to the parents for home use. For example, desired behavior could be increased using praise or positive attention, and undesired behavior could be reduced using planned ignoring or time out (for a more complete description of these techniques, see Barkley, 1998).

Oppositional behavior. Children who are oppositional or noncompliant, such as those with comorbid oppositional defiant disorder (ODD), may also have difficulties with HRT. In particular, these children may refuse to use competing responses as directed, participate poorly during sessions, or argue when their parents try to implement social support procedures. Expert clinicians could address these behaviors by incorporating behavioral treatment for noncompliance into the treatment plan (e.g., McMahon & Forehand, 2003). Clinicians may also address treatment resistance using motivational interviewing (Miller & Rollnick, 2002), which is designed to address ambivalence toward treatment and enhance the client's desire to initiate and maintain behavior change.

Developmental disorders. When treating a child with a co-occurring pervasive developmental disability (PDD), expert clinicians should be able to distinguish tics and habits from stereotypic movements and be able to adapt HRT procedures for this population. Woods, Piacentini, and Himle (2007) suggested that three symptom features can aid a clinician

differentially diagnosing tics from stereotypies. First, although tics do occur in this population, it is more likely for a repetitive behavior to be a stereotypy when there is also a diagnosis of a developmental disability. This is especially true for complex repetitive movements such as body rocking. Second, a single stereotypic movement that does not vary in location or severity is more likely to be a stereotypy. Third, stereotypic movement disorder is a more appropriate diagnosis if the child has a limited number of complex movements in the absence of a history of simple head or facial tics.

Although some literature supports use of HRT for tics and BFRBs in persons with a PDD (Richman & Lindauer, 2002; Roane, Piazza, Cercone, & Grados, 2002), an empirical evaluation of how a PDD diagnosis moderates HRT efficacy has not yet been conducted. Children with PDDs may have difficulty with treatment compliance, may have limited awareness of the target behavior, and may demonstrate a limited ability to independently implement a competing response. Given these possible limitations, expert clinicians may choose to focus primarily on function-based interventions. In the case of a self-injurious habit, clinicians may also want to teach the use of a competing response using discrete-trial training or shaping procedures (Sigafoos et al., 2006).

A case may also be complicated when difficulties arise for some children during particular components of HRT. Some of these difficulties are highlighted and discussed as follows.

Urge does not diminish or patient cannot tolerate urge. Ideally, children can use the competing response contingent upon the experience of an urge, so that habituation to the urge can occur. However, the child may have an intense or particularly strong urge that is difficult to endure.

When children have an urge that is particularly difficult for them to endure, clinicians may want to devote entire sessions toward competing response practice to provide additional support and encouragement. As mentioned previously, clinicians can also graph the child's subjective urge ratings during practice, to help the child notice any reductions in urge intensity.

Urge difficulties might also be addressed by the expert clinicians using a combined ACT/HRT approach to enhance the client's ability to willingly experience the urge. This approach is generally recommended for older adolescents and adults. A treatment manual for ACT-enhanced behavior therapy for TTM by Woods and Twohig (2008) is available for clinical use. It is likely that this treatment approach could be easily adapted for other habit behaviors, such as skin picking. It is recommended that clinicians using this approach understand the competencies thought to be associated with successful application of ACT, which have been described elsewhere (Strosahl, Hayes, & Wilson, 2005).

Difficulty in establishing awareness. Another treatment challenge that may arise during awareness training is the difficulty in establishing awareness. Occasionally, instances of the target behavior and/or its preceding sensations do not occur naturally during the session. In this case, it can be beneficial for the clinician to elicit occurrences of the behavior by creating high-risk situations that were identified in the functional assessment. For example, a clinician could ask the child to describe a stressful event, sit with the child in front of a mirror, or center conversation around a topic related to the target behavior, such as hair or skin. If this strategy does not work, clinicians could ask the child to model instances of the behavior to at least allow him/her the opportunity to practice identifying it in the session. Clinicians could also ask the child's parent to videotape the child during a high-risk situation that occurs outside of session. The clinician could then review the tape with the child and ask the child to point out instances of the target behavior as they occur on the video.

In the case of TTM or oral-digital habits, clinicians may also recommend the use of an electronic awareness-enhancement device, which is designed to emit sound whenever the

client's hand is raised above his/her neck (Rapp, Miltenberger, & Long, 1998). Alternatively, for females, a set of bracelets that make a sound when the arm is moved may serve a similar function. Another treatment idea comes from Risvedt and Christenson (1996), who found that a woman's awareness of hair pulling was enhanced when a topical cream called capsaicin, which increases skin sensitivity, was applied to her scalp.

Difficulties in implementing the competing response. Difficulties that an expert clinician should be able to troubleshoot often arise during competing response training. Children may be dissatisfied with a competing response for a host of reasons. They may find that the competing response is too conspicuous, painful, difficult to hold for a long period of time, or disruptive of other activities.

Clinicians should thoroughly assess the reasons for a child's dissatisfaction. In some cases, alternative competing behaviors can be selected if they are available. For example, if a child finds that doing controlled breathing for 1 min interferes too much with his/her ability to hold a conversation, a clinician might suggest a slight modification, in which the child pauses speech upon experience of an urge, takes a breath in, and speaks on exhale (Conelea, Rice, & Woods, 2006). Research also suggests that competing responses may still be effective even if they are compatible with the tic (Woods et al., 1999). For example, if a client experiences neck pain while tightening neck muscles, he/she could be told to tighten the leg muscles contingent upon the urge for the head tic.

Children may be worried that the competing response will be too distracting, and make it more difficult to attend to concurrent activities. Preliminary experimental data suggest that some children with TS may experience decrement in the accuracy of a concurrent task while they are suppressing tics (Conelea & Woods, 2008b). However, the authors of this study suggest that increased practice of the competing response will probably increase automaticity of the behavior, making it easier for the child to implement in a distracting environment. Therefore, if a child presents with this concern, the clinician may suggest that the child initially practice the competing response in an "easy" setting with few concurrent demands. Once competing response use has been mastered in this setting, the child can be encouraged to implement it in more complex or demanding settings.

A thorough assessment of competing response dissatisfaction may also reveal areas of difficulty that necessitate additional treatment procedures. For example, a child with a BFRB may think that the competing response is too embarrassing and may fear using it in front of his/her classmates. Cognitions related to this fear could be explored and addressed using cognitive restructuring. In the case of children with overlapping TS and OCD symptoms, the competing response may be ineffective for a compulsion incorrectly classified as a tic. For example, the child might engage in another compulsive behavior to alleviate obsession-related anxiety or simply be unable to hold the competing response for a sufficient amount of time. Therefore, when children with TS and OCD present with competing response difficulties, it is recommended that clinicians conduct additional assessment of the child's premonitory experience and include questions specifically designed to reveal possible obsessions. Clinicians should keep in mind that children who are embarrassed or uncomfortable talking about their obsessions may not have discussed them at the outset of therapy, but may be more likely to discuss them later in the treatment. If the assessment suggests that the "tic" might be better classified as a compulsion, a shift to ERP is likely warranted.

Addressing complex tics. Complex tics may present a challenge during competing response training. For example, a child may have a series of tics that occur in a particular pattern and last for a long duration. In this case, the clinician should focus on helping the child implement

a competing response for the first tic in the sequence. Competing responses should also be selected for each distinguishable movement within the complex tic sequence, as well as enable the child to suppress the tic at any point in the sequence. Therefore, if a child forgets or is unable to implement the competing response for the first tic in the sequence, he/she can still benefit from implementing a competing response to prevent the full complex tic from occurring. As has been mentioned elsewhere in this chapter, complex tics may also be difficult to treat because of their similarity with compulsions or stereotypies. If a clinician decides to treat the target behavior as a tic using the traditional HRT approach but encounters limited success, it may be beneficial to re-assess the behavior to ensure that it has been accurately categorized.

BFRBs occurring at night or during sleep. Night-time oral-digital habits, such as thumb sucking, may be difficult to treat using standard HRT procedures. It has been recommended that function-based interventions be used to address these habits. First, a safe but aversive substance could be applied to the child's digits prior to bedtime (Friman, Barone, & Christopherson, 1986). Second, the child can wear gloves or bandages during sleep (Ellingson et al., 2000). The second intervention option may also work well for children who pull their hair while they are trying to fall asleep.

Establishing generalization. Expert clinicians should understand how to ensure that generalization of treatment gains occurs. One potential generalization problem that may arise is that the child only uses the competing response in the presence of the support person or the therapist. Remote detection procedures, in which the support person covertly monitors the child and rewards independent use of the competing response, may be helpful in this case. It may also be beneficial to recruit other people in the child's life to help praise the child for correct implementation of the competing response, such as the child's siblings or other family members, coaches, teachers, babysitters, or peers. Similarly, the child may have trouble using the competing response in places other than home or the therapy room. Again, providing reinforcement across multiple settings, situations, and events may probably increase competing response use globally and enhance generalization.

One area in which children may have difficulty using competing responses is in the school setting. Clinicians can help to create situations that simulate the school experience so that the child is able to practice the competing response in a similar setting. For example, a clinician may ask the child to sit at a desk during a portion of the session or ask him/her to take notes while watching an educational video or listening to the therapist talk. It may also be beneficial to recruit the child's teacher as a social support person. For older children with multiple teachers, a close peer who is with them for multiple portions of the day may also serve as a social support person. When social support procedures are used in the school setting or any other public setting, it may be beneficial for communication between the client and their social support person to be inconspicuous, so as not to draw attention to the child or his/her problem behavior. Hand signals or code words may be used as subtle reminders for the child to use a competing response.

9.8   Transition from Basic Competence to Expert Competence

Although there are no data to help define the distinction between basic and expert HRT competencies, it is likely that the variables that best distinguish these competency levels are related

to a clinician's ability to treat cases of varying complexity and to adapt treatment procedures to best serve the needs of a particular client. There are several strategies that can help a clinician develop the competencies that probably capture the abilities of an expert.

One of the most important steps in the transition from basic to expert involves having exposure to multiple cases that cover a wide breath of symptom presentations. Although TS and habit disorders share key features, the distinct features associated with each diagnosis call for slightly different variations of the HRT procedure. Even HRT for one disorder, such as TS, may differ depending on several case variables, such as the number, complexity, and severity of tics; degree of tic awareness and premonitory urge experience; comorbidity profile; and social support network. By seeing a variety of children with TS and habit disorders, clinicians are more likely to be exposed to the types of clinical issues discussed in this chapter and to have the opportunity to practice adapting the basic principles of HRT across an array of individually nuanced cases.

Another step in developing expert competencies involves seeking out training and, if possible, supervision from another clinician who is already an HRT expert. Interaction with an expert gives clinicians the opportunity to ask questions about a typical case presentation, to receive personalized guidance and feedback about their own skills, and the potential to learn by observing the expert deliver the treatment. In order to establish contact with an expert, clinicians can seek out training opportunities at research conferences or workshops, which are occasionally sponsored by patient support organizations such as the Tourette Syndrome Association and the Trichotillomania Learning Center. These organizations also offer clinician referral services that clinicians can use to find experts in their geographic area.

Finally, reading the existing treatment literature on TS and habit disorders, as well as staying up to date on recent research, can greatly enhance a clinician's knowledge base. Knowing the literature on TS/habit disorders benefits a clinician in various ways. First, clinicians who are well versed in the literature can share their knowledge with clients during psychoeducation. Second, staying up to date on the literature ensures that clinicians are using empirically supported variants of HRT. Although the core principles of HRT have remained similar since the initial treatment outcome study by Azrin and Nunn (1973), empirically based modifications to the treatment have occurred over the years, culminating in recent adaptations of the treatment (e.g., Woods & Twohig, 2008; Woods et al., 2008). In addition, it is likely that the future research will begin to examine the differential benefit of these approaches. It is possible that the data garnered from this research will lead to differences in the way the treatment for TS and habit disorders is currently practiced. Staying abreast of the literature will help the clinicians to make empirically sound and informed treatment decisions, currently and in the future.

9.9   Summary

Treatment of tic and habit disorders in children and adolescents requires familiarity with the symptoms of these disorders and their assessment. In addition, understanding the principles and techniques associated with efficacious treatments is likely to contribute to treatment success.

Although outcome research has demonstrated the efficacy of some TS and habit disorder treatments, particularly HRT, no research has yet examined the role of therapist competency in client outcome. This chapter provides information on competencies that likely contribute

to outcome variance, such as treatment compliance, acceptability, and maintenance. Where possible, data were used to substantiate suggestions regarding therapist competencies; however, it is important to note that many of the recommendations provided in this chapter are yet to be explored empirically. For example, no research has yet examined if or how outcome is impacted when clinicians make modifications to the HRT protocol, such as changing the duration of the competing response or using cognitive restructuring to address a child's thoughts about his/her symptoms. Similarly, the distinction between basic and expert competency with respect to the treatment of these disorders has not been empirically delineated.

Future research will likely help to guide our understanding of therapist competency as it relates to the successful treatment of tic and habit disorders. For example, effectiveness studies could be a first step in examining the impact of protocol deviations on outcome. This research could also provide insight into understanding whether the outcome differs between those categorized as basic and those categorized as expert clinicians. However, until these data are available, it is likely that the recommendations provided here will serve, at the least, as a starting point to guide clinicians interested in treating patients with these disorders.

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10 Anorexia and Bulimia

David M. Garner · Christopher D. Keiper

Abstract: Therapist competency is fundamental to the success in treating most psychological disorders. However, the skills required to effectively treat eating disorders may be more demanding than for many other psychological disorders because achieving competency requires familiarity with a body of scientific knowledge covering areas that are not generally a part of clinical training. Information on nutrition, dieting, biology of weight regulation, physical complications, and culture must be added to an understanding of more general psychological themes pertinent to eating disorders. Various theoretical approaches have been developed against which therapist competency can be evaluated in the treatment of eating disorders; however, this chapter describes the cognitive behavioral framework because it is the most popular and best researched. Prominent themes from the cognitive perspective include: 1) idiosyncratic beliefs related to food and weight; 2) specific reasoning errors and disturbed information processing related to the significance given to weight and shape; 3) the role of cultural ideals for feminine beauty that place a premium on dieting and weight control as a marker for self-worth; 4) positive and negative cognitive reinforcement contingencies that maintain symptoms; 5) the operation of underlying assumptions, dysfunctional self-schemas and core beliefs (e.g., low self-esteem, self-identity, perfectionism, pursuit of asceticism, need for self-control, fears of maturity, "anorexic identity," and interoceptive deficits); and, 6) the physiological consequences of starvation that tend to aggravate pre-existing emotional disturbance and maintain disordered beliefs and behavior. The distinguishing feature of the expert clinician is the ability to identify the relevant themes and then creatively implement effective interventions that address the complex determinants of behavior. As described in this chapter, perhaps the most important element in the transition from basic to expert skills as a therapist is acquiring state-of-the-art training and supervision from a skilled and experienced therapist.

10.1 Overview

10.1.1 Prevalence and Associated Problems

Eating disorders have been part of the psychiatric nomenclature for many years; however, only in the past 2 decades have they commanded widespread interest in psychology, psychiatry, and allied professions (Theander, 2004). Part of the reason for this interest has been the recognition of the severe health consequences of the disorders; anorexia nervosa (AN) has a long and established history of high mortality, having an estimated average standardized mortality ratio (the ratio of observed to expected deaths) of 10.5, with the leading cause of these deaths being suicide (Birmingham, Su, Hlynsky, Goldner, & Gao, 2005; Franko & Keel, 2006). AN mortality rates are consistently ranked the highest of any other psychiatric disorder (Millar et al., 2005; Sullivan, 1995). Although mortality rates for bulimia nervosa (BN) are much lower, they are still notable (Nielsen, 2003). The prevalence rates of eating disorders in Western cultures are the topic of some debate; however, most epidemiological

studies point to the prevalence of 0.3% for AN and 1% for BN among young women (Hoek & van Hoeken, 2003).

Medical complications are typical during the acute phase of an eating disorder (Becker, Grinspoon, Klibanski, & Herzog, 1999) and persist among those who are unsuccessfully treated (Keel, Mitchell, Davis, & Crow, 2002). In addition, eating disorders are associated with a wide range of physical and emotional disorders through early adulthood, including major depression, obsessive compulsive disorder (OCD), substance abuse, and anxiety disorders (Johnson, Cohen, Kotler, Kasen, & Brook, 2002; O'Brien & Vincent, 2003). The complex interplay between the psychological and physical symptoms contends against defining eating disorders as exclusively "psychiatric" or "medical," as effective treatment must target both domains.

10.1.2 Diagnostic Classification

The prevailing diagnostic systems, the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed. [*DSM–IV*]; American Psychiatric Association [APA], 1994) and the *International Classification of Diseases* (World Health Organization, 1992) have limited the current classifications of eating disorders to one of three diagnostic categories: that of AN, BN, and a third category of disorders not matching stringent criteria for either, which is labeled eating disorders not otherwise specified (EDNOS). AN individuals have further been classified into subtypes of those who simply restrict caloric intake (AN-R) and those who have symptoms of bingeing and/or purging (AN-B/P). Binge-eating disorder (BED), characterized by binge-eating episodes and lack of compensatory behaviors for caloric intake, is currently classified under EDNOS; however, it is likely to be addressed in more detail in the forthcoming edition of the *DSM* (Wilfley, Bishop, Wilson, & Agras, 2007).

Despite the requisite nature of diagnostic classifications, the clinical stability of eating-disorder diagnoses have been questioned in the long-term owing to significant crossover between both the full diagnostic categories and subtypes (Eddy et al., 2008; Fichter & Quadflieg, 2007; Wonderlich, Joiner, Keel, Williamson, & Crosby, 2007). While there is some established distinctiveness between the categories of AN and BN diagnoses (e.g., Eddy et al.), the remarkable heterogeneity in psychological features within the diagnostic subgroups underscores the clinical utility of evaluating patients on a broad spectrum of meaningful psychosocial variables. For clinical purposes, there is far greater heuristic value in directly assessing the psychological domains that are conceptually relevant across all eating-disorder subgroups rather than simply drawing inferences from *DSM-IV* (1994) diagnostic categories.

10.1.3 Risk and Maintenance Factors

The understanding of factors that contribute to the etiology and maintenance of eating disorders has advanced substantially in recent decades. Most models assume that eating disorders are multidetermined and heterogeneous in nature deriving from the interplay of three broad classes of predisposing or risk factors: cultural, individual, and familial (Garner, 1993). However, cumulative evidence has begun to specify the respective roles of these categories in greater detail (Jacobi, Hayward, de Zwaan, Kraemer, & Agras, 2004; Stice, 2002; Striegel-Moore & Bulik, 2007).

Jacobi et al. (2004) have recommended conceptualizing factors in terms of clinical evidence and potency of association. Important high-potency factors that predispose the disorders are being female, in adolescence or early adulthood, having weight concerns, dieting, and ideating a negative body image. Medium-potency factors are having experienced sexual abuse and physical neglect in adolescence. Lower potency and non-specific variables that predispose eating disorders are temperament factors, frequent alcohol consumption, low social support, low self-esteem, and general psychiatric morbidity. The key maintaining or perpetuating factors are the psychological, emotional, and physical effects of starvation and semi-starvation.

10.1.4 Evidence-Based Treatment

The recommended evidence-based treatments for eating disorders generally include weight restoration/maintenance incorporated with psychotherapy. Outpatient service is possible for a large portion of patients with BN, while more acute manifestations of BN and many AN cases (owing to the clinical severity of AN behaviors and maintenance effects of emaciated state) may require a more protracted and intensive treatment to reach a desirable level of functioning (Haliburn, 2005; Garner, Vitousek, & Pike, 1992; Wilson, Grilo, & Vitousek, 2007). Pharmacotherapy treatment alone for the primary diagnoses of eating disorders is contraindicated and ineffective for weight maintenance (Castro-Fornieles et al., 2007; Wilson et al., 2007).

10.2   Recognition of Symptoms and Their Assessment

10.2.1 Screening and Initial Assessment

Initial assessment of the presence of an eating disorder should follow professional referral or a patient's volitional search for the treatment. A difficulty in assessing eating disorders, especially AN, is that often patients view their symptoms as functional, necessary, or even desirable, and may be ambivalent about seeking treatment (Garner, Vitousek, & Pike, 1997; Vitousek, Watson, & Wilson, 1998). It is, therefore, paramount that the initial interview be fostered to develop a sense of openness and trust between the clinician and patient in hopes of establishing a therapeutic alliance. In cases of denial or minimization of the symptoms, the clinician should avoid making value judgments of the patient's condition and provide empathic support in an effort to motivate the patient toward treatment (Vitousek et al., 1998). A number of standardized and non-standardized measures have been created to supplement an individual's clinical background; the conventional assessments used for screening of eating disorders will be briefly discussed.

10.2.2 Medical Assessment

Medical complications are common in those with eating disorders; therefore, patients should be assessed by a physician familiar with physical byproducts of starvation and eating-disorder symptoms such as binge-eating and vomiting. A complete medical examination should include

a medical history, review of presenting physical symptoms, laboratory tests, and careful consideration of medical conditions other than an eating disorder that could account for the patient's current state (Becker et al., 1999). Choosing a physician with experience in evaluating those with eating disorders cannot be overemphasized in the light of the complex interplay between the physical and psychological symptoms' presentation.

10.2.3 The Structured Interview

Four structured interviews have specifically been created for assessing and screening eating disorders (Grilo, 2005). These include the Eating Disorder Examination (EDE; Cooper & Fairburn, 1987), Clinical Eating Disorder Rating Instrument (CEDRI; Palmer, Christie, Cordle, Davies, & Kenrick, 1987), the Interview for the Diagnosis of Eating Disorders (IDED; Williamson, 1990), and the Structured Interview for Anorexic and Bulimic Disorders (SIAB-EX; Fichter, Herpertz, Quadflieg, & Herpertz-Dahlmann, 1998). Of these, the EDE is the most sophisticated and detailed (Grilo, 2005), and is regarded as the most established for assessing eating disorders (Wilfley, Schwartz, Spurell, & Fairburn, 2000). In addition, the EDE has been adapted for use with children and adolescent patients (ChEDE; Bryant-Waugh, Cooper, Taylor, & Lask, 1996). The latest revision of the IDED focuses exclusively on providing differential diagnosis using *DSM-IV* (1994) criteria. The SIAB-EX differs from other interviews in providing information on general and familial psychopathology linked to eating disorders (Grilo, 2005).

Although there is an agreement that interview assessments have good potential to provide accurate information owing their probing utility (Pike, 2005), their disadvantages include their lengthy time to administer, the necessity of a trained interviewer, and the potential to be viewed as overly intrusive. Additionally, some have suggested that self-report measures may provide more accurate information of eating-disorder symptomatology based on the willingness of the patients to be more honest in the absence of an interviewer (Keel, Crow, Davis, & Mitchell, 2002; Wolk, Loeb, & Walsh, 2005).

10.2.4 Self-Report Measures

Self-report measures provide an efficient means of obtaining information for clinical purposes. While these measures should not be used as the sole basis for diagnostic and treatment decisions, they provide advantages of economical administration and scoring. Among the measures that test for general eating pathology, the Eating Disorder Inventory (EDI; Garner, 1991, 2004; Garner, Olmstead, & Polivy, 1983) has created a substantial body of supporting research (Peterson & Mitchell, 2005). The EDI was developed to assess the symptoms of eating disorders as well as related psychological variables. It has undergone several revisions; the second revision (EDI-2) is a widely used test with easy administration and scoring that attains information on eight subscales, all of which seem to be generalizable across cultures (Podor & Allik, 2009). The most recent revision (EDI-3; Garner, 2004), reorganizes items from the 1991 version (EDI-2) into three "eating-disorder risk" scales (Drive for Thinness, Bulimia, and Body Dissatisfaction), nine psychological scales, six composite scores, and three response-style indicators.

An adaptation of the EDE structured interview, the Eating Disorder Examination-Questionnaire (EDE-Q; Fairburn & Bèglin, 1994) focuses on eating-disorder symptoms and attitudes over a 28-day history. While the EDI is useful for general eating pathology, the EDE-Q is a valid instrument for making *DSM-IV* diagnoses and is considered accurate for assessing binge-eating (Pike, 2005). The EDE-Q contains four subscales: Restraint, Eating Concern, Shape Concern, and Weight Concern. It has produced levels of reliability and validity to support its use (Fairburn & Cooper, 1993) and has acceptable levels of internal consistency (Peterson et al., 2007). Also, reports finding higher levels of disturbance on EDE-Q than its EDE-interview counterpart have led to suggestions that it may be a more accurate indicator of severity of symptoms (Wolk et al., 2005).

In addition to the above mentioned assessments, the Eating Attitudes Test (EAT; Garner & Garfinkel, 1979; Garner, Olmsted, Bohr, & Garfinkel, 1982) is a useful screening instrument of severity in clinical and non-clinical samples. Other instruments, such as the Eating Disorder Questionnaire (EDQ; Mitchell, Hatsukami, Eckert, & Pyle, 1985) are useful as database tools for tracking an array of demographic information and symptoms over time (Peterson & Mitchell, 2005).

10.2.5 General Measures of Psychopathology and Medical Assessment

Complete psychiatric assessment of patients with eating disorders should also include measures of personality, psychological distress, self-esteem, depression, anxiety, family functioning, history of sexual abuse, social and vocational adaptation, and impulse-related features. Careful assessment of these related areas is important in confirming Axis II diagnoses and treatment planning.

10.3 Factors Maintaining Eating Disorders

10.3.1 Conceptualization of Risk and Maintenance Factors

A discussion on the perpetuating factors of a psychiatric disorder is necessarily based on the understanding of etiology; however, there are few models that integrate putative factors of association or causality into a developed framework for eating disorders (Tylka & Subich, 2004). Moreover, certain risk factors do not easily fit into the classes of predisposing, precipitating, or maintenance regarding the course of the disorders (Garner & Magana, 2006). Furthermore, although many associations and links have been identified, knowledge surrounding the risk factors for eating disorders is frustratingly incomplete (Strieglel-Moore & Bulik, 2007). For brevity, this discussion will limit itself to describing factors profoundly associated with eating-disordered populations, and will avoid exploring a framework that would include an etiological timeline. Additionally, factors are included for eating disorders, in general, rather than deferring to specific diagnostic classifications. This is based on the clinical utility of assessing a potential patient across conceptually associated variables that overlap the disorders. For a detailed discussion on these factors specific to their classifications, see the comprehensive review by Jacobi et al. (2004).

10.3.2 Putative Factors of Risk for Eating Disorders

There have been several large-scale reviews of the risk factors of eating disorders in recent years which have been the primary sources for our discussion (Jacobi et al., 2004; Stice, 2002; Striegel-Moore & Bulik, 2007). Jacobi et al. recommended conceptualizing a factor in terms of the magnitude of association, called its potency. Putative factors may also be broken down into their larger domains of context – whether they are derived from culture, family/biology, or are specific to the individual.

10.3.3 Cultural Factors

Cultural risk factors were originally posited to account for the high prevalence of eating disorders among women in Western countries, conceptualized as a response to pressures to achieve an ultra-thin representation of feminine beauty (Garner & Garfinkel, 1980). They are considered high-potency contributing factors; however, it is now well-established that eating disorders also occur in non-Western cultures and in minority populations (Wildes & Emery, 2001). Participating in sports or professions emphasizing thinness (e.g., gymnastics, dancing, or wrestling) is considered as another high-potency factor. Being of a minority culture while in the process of acculturation to a dominant culture is an additional factor with unspecified potency.

10.3.4 Familial and Biological Factors

Biological. One very consistent finding in the literature is the preponderance of females with eating disorders when compared with males, estimated up to ten times for both the disorders, and is a highly potent risk factor. Factors specific to genetics are also considered to be of high potency however, most studies point to a polygenic risk (involving multiple gene sites) probably conferring the risk through a predisposition to personality traits (perfectionism and obsessionality) in a Gene–Environment interaction. Some of the key biological factors of unspecified potency which are likely to contribute to maintenance are the physical effects of emaciated state (Garner, 1997).

Parental. Having a mother with an eating disorder is the highest potency familial indicator of risk for an eating disorder. Other medium-potency factors include having a parent who diets and parents making critical comments about a child's weight. Additional low and nonspecific potency factors of parents and parenting involve high-performance expectations, low contact or neglect, over-concern or hypervigilance, a parental history of obesity, high levels of exercise, and presence of an affective disorder.

10.3.5 Individual Factors

Adverse life events. Physical abuse, physical neglect, and sexual abuse are all low-to-medium potency factors of risk for developing an eating disorder. Other general stressful life events (such as loss as the result of death), have been conceptualized as a factor of low potency.

Behavioral. Major factors of extremely high potency for risk are the presence of restrictive dieting, concern/fear of gaining weight, and ideating a negative body image. Involvement in

high levels of exercise is also regarded as a high-potency factor. A final nonspecific risk factor is the abuse of substances (drugs and alcohol).

Cognitive processes and core beliefs. Central to cognitive theory of eating disorders are idiosyncratic beliefs, self-statements, automatic thoughts, and underlying assumptions about food, eating, weight, and shape that can interact with more core beliefs about the self (Garner & Magana, 2006). Constructs that have manifested valid risk for eating disorders are consistent with EDI-3 subscales (Garner, 2004). High-potency factors include having a drive for thinness, body dissatisfaction and weight concerns, low self-esteem or ineffectiveness (low self-efficacy), perfectionism, interpersonal insecurity and/or alienation/attachment deficits, and errors in reasoning. Medium-potency factors are depression, anxiety, low interoceptive awareness (difficulty in recognizing and responding to affective states), and poor emotional regulation. Cognitive factors of low and nonspecific potency are body misperception, obsessive compulsive traits, asceticism (pursuit of virtue through sacrifice), fears of reaching psychobiological maturity, and neuropsychological deficits (e.g., altered serotonin levels).

Developmental. A major factor specific to an individual's development of high potency for risk is being in adolescence. Other factors of low and unspecified potency include having childhood eating problems, pregnancy complications/premature birth, childhood anxiety, and early onset of puberty.

10.4 Evidence-Based Treatment Approaches

10.4.1 Pharmacological Treatment

Many psychiatric disorders are treated primarily by pharmacological intervention. Pharmacotherapy as a primary treatment for eating disorders has little empirical support; however, it may be useful as an adjunct to other forms of therapy for the treatment of co-occurent conditions, such as affective disorders and psychosis (Bulik, Berkman, Brownley, Sedway, & Lohr, 2007; Castro-Fornieles et al., 2007; Wilson et al., 2007).

10.4.2 Weight as a Consideration in Treatment

In contrast to the earlier decades, there is now a milieu of options for treating eating disorders, most of which have been ill-researched (Fairburn, 2005). Some emerging facilities and approaches to treatment do not require weight gain as part of therapy for patients. As mentioned earlier in this chapter, eating disorders inevitably affect both psychological and medical domains of functioning. It should be mentioned that, irrespective of the intervention being considered, the factors of weight gain and weight maintenance are inexorably linked to the course and outcome of the disorder (Garner, 1997). Clinical practice that advises against or neglects these variables is in contradiction with a wide body of clinical research; evidence that weight gain should be considered in the treatment can be observed from the use of weight gain in definitions of recovery for individuals with AN (Couturier & Lock, 2006), that weight gain is predictive of remission (Lock, Couturier, Bryson, & Agras, 2006), low weight at presentation is predictive of death in AN (Berkman, Lohr, & Bulik, 2007), and weight suppression for BN patients has a direct relationship with the frequency of bingeing and is a predictor of the outcome (Butryn, Lowe, Safer, & Agras, 2006).

10.4.3 Psychological Treatment for Eating Disorders

Although eating disorders have been recognized in modern psychotherapeutic practice for several years, only a few models of psychological treatment for eating disorders have received controlled-trial or clinical support (Wilson et al., 2007). Most trials for the treatment of AN have additionally used considerably small samples (Fairburn, 2005). As there are many approaches still in question, this chapter will reserve discussion to three approaches that have been most investigated in the context of eating disorders: interpersonal psychotherapy (IPT), family-based therapy (FBT; specifically the Maudsley approach), and cognitive-behavioral therapy (CBT).

10.4.4 Interpersonal Psychotherapy

Interpersonal psychotherapy was originally developed as a time-limited outpatient therapy for depression (Klerman, Weissman, Rounsaville, & Chevron, 1984) and was adapted for treatment of BN by Fairburn and colleagues (Fairburn, Jones, Peveler, Hope, & O'Connor, 1993). The basic tenants of the theory focus on non-directive and non-interpretive intervention, attempting to resolve relational conflicts discovered within the patient's life. The clinician focuses on one of the four problem areas: interpersonal disputes, role transitions, abnormal grief, or interpersonal deficits (Weissman & Markowitz, 2002). Clinicians and theorists advocating the use of IPT for the treatment of eating disorders cite dysfunctional interpersonal functioning found in families of the eating disordered, such as closed and rigid family structures, overprotective parenting styles, and high expectation of achievement, as well as the argument that while in adolescence these individuals are ill-equipped to deal with interpersonal demands (McIntosh, Bulik, McKenzie, Luty, & Jordan, 2000).

Efficacy of treatment. Although there have been few trials investigating the efficacy of IPT for the treatment of eating disorders, at least two studies have compared the outcomes of BN with treatments using CBT (Agras, Walsh, Fairburn, Wilson, & Kraemer, 2000; Fairburn et al., 1991). The results suggest that IPT is inferior to CBT at post-treatment, though equally effective at long-term follow-up. To our knowledge, there have been no large-scale randomized control trials of nearly any treatment modality for AN. IPT is not an exception, even though some have made theoretical arguments for its use in eating-disordered populations as mentioned earlier (McIntosh et al., 2000); however, IPT has been rated as mid-level methodologically for the treatment of BN, because it does not directly address the core dysfunction and symptomatology, and is recommended as an alternative to CBT (National Institute for Clinical Excellence [NICE], 2004).

10.4.5 Family-Based Therapy

Family-based therapy is the most investigated form of treatment for AN (Wilson et al., 2007). The best researched of these therapies is the Maudsley approach, described in detail by Lock, le Grange, Agras, and Dare (2001). Lock et al. suggested FBT for adolescent patients specifically, because adolescents are generally embedded within a family system that provides necessary nurturance and support for development. Best construed as an intensive outpatient treatment, parents and immediate family members play an active role in recovery in the

context of clinician–family meetings incorporated with weight gain. Lock et al. (2001) outlined a three-phased therapy.

The first phase of treatment involves *refeeding the patient*, and focuses almost exclusively on the eating disorder and related symptoms. It includes a family mealtime, with the clinician acting as observer and working toward absolving the parents from blame for the disorder. The second phase of treatment involves *negotiating a new pattern of relationships* for the patient, in which the patient surrenders to the will of the parents to increase the food intake. In this phase, the parents take the main control of the treatment to return their child to physical health. The third phase of treatment involves *issues of adolescence and termination of treatment*. During this last phase, the patient achieves and maintains a stable weight, which Lock et al. (2001) stated should be above 95% of ideal body weight. The core themes of this phase are embedded within establishing a healthy adolescent identity and maintaining appropriate parental–adolescent boundaries.

Efficacy of treatment. Although FBT has a widely known precedence of treatment for AN, the conception that it has strong body of empirical support is unsubstantiated, and the mechanisms of action are not well understood (Fairburn, 2005). The Maudsley approach seems to be more efficacious with younger adolescents (Fairburn, 2005; Russell, Szmukler, Dare, & Eisler, 1987; Vitousek & Gray, 2005), though there is a lack of evidence that it is better than individual therapy (Wilson et al., 2007). For AN, FBT has been awarded a mid-level rating for practice with adolescents (NICE, 2004). FBT for adolescent patients with BN has recently been investigated and is possibly efficacious (le Grange, Crosby, Rathouz, & Leventhal, 2007; Schmidt et al., 2007), though results are limited owing to small sample sizes and lack of blind assessment in the study by le Grange et al.

10.4.6 Cognitive-Behavioral Therapy

CBT is the most frequently tested individual therapy for AN (Wilson et al., 2007) and has the longest established framework of the treatments presently discussed. CBT, as a treatment for AN, was first described by Garner and Vitousek (Garner & Bemis, 1982; Garner et al., 1997). However, an alternative perspective has been presented for treating BN (Fairburn, 1985; Fairburn, Marcus, & Wilson, 1993); the treatments are largely consonant. However, it is noted that there are important treatment differences according to the diagnostic group that the patient belongs. These are based on the differing characteristics of the disorders and manifest in areas such as treatment motivation, weight gain, and introducing self-monitoring behaviors (Garner et al.).

CBT as a treatment for AN and BN is largely based on cognitive theory in which patients are collaborators in their recovery with the clinician. Using a variety of strategies, the clinician addresses dysfunctional thinking patterns, schemas, and beliefs, and guides the patient through creating new, appropriate methods of thinking. It is also noted that the framework of the intervention is sufficiently broad to address specific clinical issues by incorporating IPT or Family Therapy into treatment (Garner et al. 1997). Garner et al. have outlined a three-phased intervention.

Phase I of the treatment involves *building trust with the patient and setting treatment parameters*, and includes outlining and building a positive therapeutic alliance, fostering motivation for treatment, and assessing key features of the patient's manifestation of the disorder. As many eating-disordered patients are ambivalent about the treatment, much of this phase is dedicated to establishing this therapeutic bond. Phase II of the treatment involves *changing patient beliefs*

related to food and weight, and subsequently broadening the scope of therapy to address specific clinical issues and dysfunctional thought patterns. The core issues addressed within this phase are emphasis on weight gain and normalized eating, as well as identifying and developing cognitive skill sets for restructuring dysfunctional thoughts and schemas. Phase III of the treatment is driven toward *preventing relapse and preparing the patient for treatment termination*, and includes summarizing therapeutic progress, reviewing areas of vulnerability and continuing progress, and making the patient aware of when to return to treatment.

Efficacy of treatment. Manually-driven CBT has been rated as the treatment of choice for adults with BN and is superior to other interventions at least in the short-term, eliminating between 30% and 50% of bingeing and purging symptoms in all the cases (NICE, 2004; Wilson & Fairburn, 2002; Wilson et al., 2007). However, along with other forms of therapy, there is a desire for further empirical support for treating AN (Wilson et al., 2007). To date, there have been at least three studies comparing CBT with other forms of psychotherapy, in which no differences were found between the modalities (Ball & Mitchell, 2004; Channon, de Silva, Hemsley, & Perkins, 1989; McIntosh et al., 2005). However, the length of the treatment was truncated against the recommendations of the CBT format currently discussed. Other trials have compared CBT with the nutritional counseling in which CBT was found to be superior, but the comparison has been deemed weak (Pike, Walsh, Vitousek, Wilson, & Bauer, 2003; Serfaty, Turkington, Heap, Ledsham, & Jolley, 1999).

10.5 Mechanisms of Change Underlying the Intervention

10.5.1 The Cognitive Model of Change

Eating disorders continue to have elusive etiologies, and therefore, any discussion on the underlying actions of therapeutic change is derived from a limited understanding of how they occur. A review of the various theoretical models for the mechanisms of change in eating disorders is a daunting task and is well beyond the purpose of this chapter. We have chosen to limit the brief discussion of mechanisms of change to a cognitive framework, as it is the most popular and best researched model to date.

The essence of the cognitive theory of eating disorders is that the symptoms are maintained by a characteristic set of over-valued ideas about the personal significance of body shape and weight. Early cognitive conceptualizations were derived from clinical observations and adapted to address certain distinctive features of AN (Garner & Bemis, 1982) and BN (Fairburn, 1985) which have been increasingly applied to all eating-disorder diagnostic subgroups (Cooper, 2005; Vitousek, 1996). Relevant variables include: (1) idiosyncratic beliefs related to food and weight; (2) specific reasoning errors and disturbed information processing related to the significance given to weight and shape; (3) the role of cultural ideals for feminine beauty which have placed a premium on dieting and weight control as a marker for self-worth; (4) positive and negative cognitive reinforcement contingencies that maintain the symptoms; (5) the operation of underlying assumptions, dysfunctional self-schemas, and core beliefs (e.g., low self-esteem, self-identity, perfectionism, pursuit of asceticism, need for self-control, fears of maturity, "anorexic identity," and interoceptive deficits); and, (6) the physiological consequences of starvation that tend to maintain disordered beliefs and behavior, and aggravate pre-existing emotional disturbance. A detailed discussion on the cognitive mechanisms of

change is well beyond the scope of this chapter; however, the relevant theoretical principles can be found elsewhere in comprehensive reviews (Cooper, 1997, 2005; Garner, Vitousek, & Pike, 1997; Vitousek, 1996; Wilson et al., 2007).

Of relevance in a practical chapter on competence in the treatment of eating disorders is an understanding of stereotypic beliefs and attitudes about food, shape, and weight characteristic of eating disorders. Body dissatisfaction and the desire to lose weight (drive for thinness) are two of the most well-recognized cognitive precursors to dieting and development of eating-disorder symptoms in community samples of preadolescents, adolescents, and adult females (Jacobi et al., 2004; Stice, 2002). It is important for the novice clinician to be familiar with the "proximal" (versus remote) causes of eating-disorder behavior as being derived from the supreme importance given to weight or shape in maintaining the vast array of thoughts and behaviors displayed by those with eating disorders. The cognitive-behavioral model does not disavow the role of remote etiological variables (i.e., biological, genetic, constitutional, developmental, and personality), but "declines to take a strong position on the contribution [of these factors]" (Vitousek & Ewald, 1993). The cognitive approach to eating disorders can be distinguished not by the specific content or timing of the presumed etiologic variables, but rather by the methods used in evaluating their relevance, as well as the general sequence followed in exploring the historical material. The cognitive approach does not make *a priori* assumptions regarding the relevance of historical variables; however, their relevance is dictated by the degree of confidence with which they can be linked to current eating-disorder symptoms and current overall functioning. By their nature, some variables or constructs (e.g., early feeding patterns) defy the credible linkage or proof. Moreover, the sequence in exploring historical material distinguishes the cognitive approach by focusing "on proximal factors which maintain the disorder while gradually working back to explore distal belief systems which may have played a role in the actual development" (Garner & Bemis, 1985, p. 108). This model allows the exploration of historical themes relevant to the meaning system of a particular patient, without compelling all the cases to fit into one explanatory system.

10.6   Basic Competencies of the Clinician

Eating disorders have a reputation of being difficult to treat; however, experienced clinicians following current guidelines for care can have a very positive impact on the outcome. Although therapist competency is fundamental to the treatment of all psychological disorders, proficiency in treating eating disorders requires a familiarity with a body of scientific knowledge covering areas that are not generally a part of clinical training. Information on nutrition, dieting, biology of weight regulation, physical complications, and culture must be included to understand the more general psychological themes pertinent to eating disorders.

10.6.1 General Therapist Qualities

There is broad agreement that trust in the therapeutic relationship is a key to success with most patients and is fundamental in promoting change in diffident and often resistant eating-disorder patients. Being able to trust one's therapist is judged by the patients and former patients as the most important component of treatment quality (de la Rei, Noordenbos, Donker, & van Furth, 2008). Basic skills are required for the therapist to convey warmth, accurate empathy,

genuineness, trust, and a collaborative relationship. Particularly, in light of the eating-disorder patient's ambivalence about the goals of treatment, it is vital that the therapist be cognizant of the patient's ongoing appraisal of the quality of the relationship. The therapist must strive to convey qualities of appropriate warmth, sensitivity, compassion, genuineness, honesty, flexibility, engagement, acceptance, positive regard, and be acutely attuned to how the patient is feeling about the treatment progress, as well as the therapist's role in this process. The patient's confidence in the therapist's trustworthiness, emotional fortitude, and technical skills are pivotal in establishing a therapeutic connection.

10.6.2 Duration and Structure of Cognitive Therapy

The duration of treatment for BN is typically about 20 weeks (Fairburn, Marcus et al., 1993); however, it is well recognized that difficult patients may require a longer period of care (Wilson et al., 2007). In contrast, treatment for AN often lasts more than a year (Garner et al., 1997). The longer duration of treatment is required in most cases of AN, because of the time required to overcome motivational obstacles, achieve appropriate weight gain, and occasionally implement inpatient or partial hospitalization.

The structure of individual cognitive-therapy sessions is similar for BN (Fairburn, Marcus et al., 1993) and AN (Garner et al., 1997). Each session involves: (1) setting an agenda; (2) self-monitoring is reviewed; (3) dysfunctional behaviors, schemas, and core beliefs are identified and changed; (4) the session is summarized, and homework assignments are specified. For AN, additional components are added for addressing poor motivation, checking the patient's weight, discussing weight within the context of goals, reviewing physical complications, and meal planning (Garner et al.). Also, in AN, therapy format must be adapted with respect to the age of the patient and clinical circumstances. Meeting format may be individual, family, or a mix of both formats, according to the clinical needs.

10.6.3 Two-Track Approach to Treatment

Throughout all the stages of treatment, there are "two tracks" to treatment. The first track pertains to symptom control in areas related to eating, weight, bingeing, vomiting, strenuous dieting, and other behaviors aimed at extreme weight control. The second track addresses the psychological context of the disorder, including beliefs and thematic underlying assumptions that are relevant to the development or maintenance of the disorder. In practice, there is considerable switching back and forth between the two tracks during the therapy. Greater emphasis is placed on track 1 early in the therapy, emphasizing on the interdependence between the mental and physiological functioning. Subsequently, the treatment shifts to track-2 issues, as progress is made in the areas of eating behavior and body weight.

10.6.4 Motivation for Treatment: Addressing Resistance in a Constructive Manner

Eating-disorder patients have been labeled as resistant, stubborn, defiant, and unmotivated to change. This overgeneralization is unwarranted for many patients whose veneer of

non-compliance is overshadowed by the awareness of their fragile physical and emotional state and wish to change. However, resistance to change is a common clinical obstacle for many, particularly, when they are directed to focus on behavioral change of eating-disorder symptoms. Thus, the clinician should expect that some patients will lack motivation or, at the very least, experience ambivalence at the beginning of therapy and at certain points thereafter. One of the key roles of the therapist is to assist in cultivating and sustaining motivation for change. Methods have been suggested for minimizing therapist anger that can result from the lack of patient progress as well as improving motivation (Vitousek et al., 1998). Motivation partly depends on the goals of the treatment; if the degree to which the therapist and the patient have shared goals is greater, then the cooperation will also be greater. From the earliest stages of treatment, goals need to be negotiated, which balance the need to focus on behavioral change while focusing on the underlying psychological issues. Educating patients about the starvation symptoms and the long-term effects of dietary restriction can play a valuable role in helping the them move toward behavioral change, as failure to correct these problem areas precludes the understanding and changes underlying psychological issues.

10.6.5 Content Domains for Competency in the Treatment of Eating Disorders

Content domains of therapy which reflect competency in the treatment of eating disorders have received very limited research attention in the field, other than empirically derived practice guidelines for eating-disorders treatment (APA, 2006; NICE, 2004). However, practice guidelines do not directly address the issue of competency. Thus, the remainder of this chapter comprises these practice guidelines and is supplemented by our own clinical experience pertaining to treatment competency. In one of the few studies to examine content domains associated with quality of treatment, de la Rie, Noordenbos, Donker, and van Furth (2008) surveyed therapists, current patients, and former patients to determine the factors that contribute to the quality of treatment from both therapist's and patient's perspective. ❯ Table 10.1 provides the ranking of the top ten items with respect to therapist and patient perception of factors contributing to quality of treatment. All the items from the questionnaire were factor-analyzed, and the results revealed seven interpretable factors explaining 33% of the variance. The factors were: "mastery," "treatment modalities," "information," "focus on underlying problems," "bond with the therapist," "acceptance," and "focus on eating behavior." In general, therapists most often stressed the focus on eating-disorder symptoms and behavioral change, whereas current and former eating-disorder patients most often stressed the importance of the therapeutic relationship and the need to address problems underlying the eating disorder. Despite these differences, the main finding was that the therapists and patients shared many values on the factors associated with the quality of treatment.

10.6.6 Basic Competence in Assessment of Eating Disorder Symptoms

Assessment of key clinical features of eating disorders is a basic skill-set required of the clinician. A detailed weight history should be taken to gather information regarding the nature and temporal sequence of events in the development of eating disorder. The assessment should include careful questioning regarding the duration and frequency of binge-eating and vomiting, as well as abuse of laxatives, diuretics, and diet pills. It should also cover other

◉ **Table 10.1**

Ranking of weighted criteria on the quality of treatment of eating disorders by therapists and eating disorder patients (Adapted from de la Rie et al., 2008. *International Journal of Eating Disorders, 41*, 307–317)

Therapists rank	Patients rank	Ten most-important weighted criterion items
1	6	Being respected
2		Learning take your own responsibility
3		Learning how to eat normally
4		Focus on recovering weight
5		Focus on improving your body image
6	2	Being taken seriously
7	1	Trust in therapist
8		Explanation or information on EDs
9		Keeping a(n) (eating) diary
10	9	Being able to talk about eating behaviors
	3	Treatment that addresses the person
	4	Being able to talk about feelings
	5	Focus on self-esteem
	7	Being able to talk about thoughts
	8	Addressing underlying problems
	10	Being accepted as you are

weight-controlling behaviors, such as other drug or alcohol use to control appetite, chewing and spitting food out before swallowing, prolonged fasting, and vigorous exercise for the purpose of controlling body weight. As mentioned earlier, there are numerous standardized self-report measures and structured interviews to assess eating pathology that can be used to supplement the clinical assessment (Peterson & Mitchell, 2005).

10.6.7 Educational Topics to Achieve Basic Competence

Most would agree that "generalist" skills are insufficient in the treatment of eating disorders. The competent clinician requires familiarity with specific scientific information about physical and psychological complications that perpetuate eating disorders, and this information needs to be conveyed to the patient to encourage self-responsibility and collaboration in the recovery process. "Psycho-education" has become a standard component of CBT (Garner, 1997; Garner, Rockert, Olmstead, Johnson, & Coscina, 1985) and is based on the assumption that eating-disorder patients often suffer from misconceptions about the factors that both cause and maintain symptoms. Patients are less likely to persist in self-defeating symptoms if they are made truly aware of the scientific evidence regarding the factors that perpetuate eating disorders. The educational approach conveys the message that the responsibility for change rests with the patient; this is aimed at increasing motivation and reducing defensiveness. Psycho-educational

topics will be briefly summarized and the reader should consult primary references to gain a more complete understanding of the content areas.

10.6.8 Weight Suppression and Eating-Disorder Symptoms

Eating-disorder patients typically do not appreciate the extent to which their food preoccupations, binge-eating, emotional distress, cognitive impairment, and social withdrawal are secondary to their extreme attempts to reduce or control their weight. As mentioned earlier, symptoms that once were thought to be primary features of those with eating disorders are actually better understood as consequences of semi-starvation observed in normal volunteers exposed to periods of sustained weight loss (Garner, 1997). The description of the "starvation state" as normal physiological consequences of weight suppression can mitigate guilt or defensiveness about the symptoms that may have been perceived as "primary psychopathology." It also introduces the notion that the current starved-state seriously impedes the reliable assessment of personality features, and also implies that restoring biological equilibrium is necessary to address fundamental emotional problems. Finally, the patient may be motivated through an understanding that increased food intake and the inevitable weight gain will possibly act as a method of diminishing some negative affective experiences of the disorder. Following on this thought, we have recommended that patients should think of food as "medicine" (Garner, 1997). Education must be presented sensitively to avoid minimizing the patient's current experiences that may be influenced by distorted perceptions resulting from starvation.

10.6.9 Education Indicating that Dieting Does Not Work

Long-term follow-up studies of obesity treatment consistently indicate that 90–95% of those who lose weight will regain it within several years (Garner & Wooley, 1991; Mann et al., 2007). Patients can benefit from understanding that the failure of restrictive dieting in permanently lowering body weight is not related to a lapse of will-power; rather, it is logically consistent with the biology of weight regulation that shows that weight loss leads to metabolic adaptations designed to return body weight to levels normally maintained. It is also important to emphasize that restrictive dieting may lead to weight gain in normal adolescents. Prospective studies on adolescents indicate that dieting to lose weight may actually result in weight gain and binge-eating over the course of 3–5 years (Field et al., 2003; Neumark-Sztainer, Wall, Haines, Story, & Eisenberg, 2007).

10.6.10 Education Indicating that Restrictive Dieting Increases the Risk of Bingeing

Therapists should understand the literature on dieting as a risk factor for binge-eating (Jacobi et al., 2004; Polivy & Herman, 2002) as well as the development of full-blown eating disorders (Jacobi et al.; Patton, Selzer, Caffey, Carlin, & Wolfe 1999). Severe calorie restriction breaks down into binge-eating over time, even among the most dedicated dieters – those with the "pure" restricting AN. Over an 8-year follow-up, 88% of pure restricting patients reported

regular binge/purge behaviors (Eddy et al., 2002). The fact that binge-eating can occur in the absence of primary psychopathology is surprising to many patients and can serve as a springboard to a new understanding of the need to restore normal eating patterns.

10.6.11 Education About the Self-Perpetuating Cycle of Binge-Eating and Vomiting

Self-induced vomiting and laxative abuse usually begin as methods of preventing weight gain by "undoing" the caloric effects of normal eating or binge-eating. It becomes self-perpetuating, because it allows the patient to acquiesce to the urge to eat but eliminates the feedback loop that would stem underlying hunger and food cravings.

10.6.12 Education Regarding Laxative Abuse

Laxative abuse is dangerous because it contributes to electrolyte imbalance and other physical complications. Perhaps, the most compelling argument for discontinuing their use is that they are an ineffective method of trying to prevent the absorption of calories (Garner, 1997).

10.6.13 Education Regarding Physical Complications

Eating-disorder patients should have a medical evaluation to determine the overall physical status and to identify or rule out the physical complications associated with starvation and certain extreme weight-loss behaviors (Becker et al., 1999). However, all clinicians should be aware of the range of physical complications that can be expected in those with eating disorders.

10.6.14 Education About Eating Disorders

Attention should be given to clarifying myths resulting from inaccurate or conflicting reports regarding etiology and complications of eating disorders (Garner et al., 1997).

10.6.15 Assessment and the Rationale Regarding Body Weight

Therapists without specialized training in treating eating disorders may conclude that weighing patients is either outside of their role or that it can interfere with the therapeutic relationship. Some patients may resist the idea of being weighed as part of outpatient management. However, there are practical and theoretical reasons regarding why every therapist offering specialized eating-disorder treatment should routinely assess the body weight of patients who are underweight. At a practical level, it would be irresponsible to ignore self-harming behaviors in a suicidal patient, as it would be inappropriate to ignore a precipitous drop in

body weight in an eating-disorder patient. Clearly, it is advisable for all seriously ill patients to be monitored by medical specialists; however, there is an added layer of protection when the therapist also weighs the patient. At a theoretical level, assessing body weight emphasizes the interdependence between physical and psychological functioning.

The clinician must be sensitive to the patient's current level of understanding and motivation when formulating body weight and eating goals. If body weight is below a BMI of 17.5 or if weight loss has been precipitous, then a partial hospitalization or inpatient treatment may offer sufficient structure to facilitate weight gain and is highly recommended. However, at the very beginning of the therapy, informing the patient about a precise weight goal may not be practical until there has been the opportunity to gather detailed information on the patient's personal weight history. Moreover, early in therapy, it may be prudent to avoid non-productive battles about "target" weight, and instead, can focus on educating the patient about the factors that must be considered in establishing a healthy body. Once the patient understands the range of factors that must go into recommendations about the body weight, there is more opportunity for thoughtful discussions and ultimate agreement on this difficult topic. Another way to address the issue of weight and eating-disorder symptoms is to keep a short-term focus. In the absence of formal agreement to change the eating-disorder symptoms, it is still possible to proceed with "experiments" aimed at stabilizing the body weight, normalizing eating, and controlling bingeing, vomiting, and laxative abuse.

Delineation of all the factors that must be considered in establishing a target body-weight range is beyond the current discussion; however, the APA Practice Guidelines for eating disorders (APA, 2006) provides a good source. As a general rule, favorable outcome with both anorexia and BN is associated with achieving a body weight that may be closer to 90% of premorbid weight (or extrapolations from pediatric growth charts), rather than attaining some percentage of population norms for body weight. In adolescent onset of AN, pediatric growth charts available through the Center for Disease Control provide valuable information about the trajectory of weight gain prior to the onset of the eating disorder. This concept can be alarming for patients with a higher premorbid body weight. Timing and sensitivity are essential in relating this information to patients, as prematurely recommending a higher weight that is terrifying may drive the patient from the treatment, while avoiding the topic entirely fails to address a primary treatment issue and is likely to lead to a therapeutic impasse.

10.6.16 Meal Planning and Self-Monitoring

Self-monitoring and meal planning are specific strategies to impose structure and regularity to dietary intake in those with eating disorders. Meal planning consists of specifying the details of eating in advance. It involves prescribing specific foods and amounts to be consumed, and describing the context, such as place and time. The structure imposed by meal planning allows most patients to relax rigid rules about food, and assures them that they will not be allowed to go too far in the direction of either overeating or under-eating. Self-monitoring involves recording all food and liquid ingested shortly after consumption. Therapists should feel comfortable with both the procedures and should review the meal planning or self-monitoring forms in each meeting as well as associated problematic eating behavior and dysfunctional thoughts.

10.6.17 Interrupt Bingeing and Vomiting

Basic competency in treating eating disorders involves familiarity with different strategies for interrupting binge-eating and self-induced vomiting, as well as other eating-disorder symptoms designed to lose weight. A detailed presentation of these techniques is beyond the scope of this chapter, though they have been reviewed elsewhere (Fairburn et al., 1993; Garner, 1986). Practical strategies for changing cognitive focus include: (1) delaying acting on urges to binge and purge, (2) distracting away from troublesome thoughts and urges, and (3) engaging in alternative behaviors that can break the thought chain, such as abruptly leaving the house to go for a walk, making telephone calls to friends, listening to loud music, or watching television.

10.6.18 Early Cognitive Implementations

Early treatment areas targeted with the patient largely revolve around increasing motivation for change. As indicated earlier, while some eating-disorder patients enter therapy "ready" to face the challenges of weight gain and losing the functionality of their eating disorder, many do not (Geller, 2006). Issues and beliefs often addressed early in therapy are the fear of weight gain and shape change, losing control surrounding food, and false beliefs concerning food and dietary health. Helping the patient to understand the often fluctuating path of symptoms toward recovery, allowing the patient to analyze the pros and cons of the disorder, aiding the patient in cognitively projecting into their future lives with and without the disorder, and reframing the ego-syntonic eating-disorder symptoms as incompatible with long-term goals may also be addressed at the beginning stages of the therapy.

10.6.19 Develop Cognitive Restructuring Skills

Cognitive restructuring is a method of examining and modifying dysfunctional thinking. Automatic thoughts, beliefs, and assumptions can be pinpointed by increasing awareness of the thinking process. They may also be accessed by observing behavioral patterns. For example, restricting eating to "fat free" foods implies certain beliefs. The automatic thought may also be identified by focusing on particular situations and replaying the thinking and feeling associated with that situation. Then, the patient is encouraged to generate and examine the evidence for and against a particular dysfunctional belief. Most of the following cognitive strategies have been described in connection with the treatment of other emotional disorders; however, the content and style must be adapted with regard to eating disorders. Throughout the course of therapy, the therapist needs to assist the patient in learning to identify the dysfunctional thoughts and the processing errors that influence his or her perceptions, thoughts, feelings, and symptomatic behavior. The clinician also must take particular care to avoid allowing interventions to deteriorate into an inquisition or argument over points of logic. There is a delicate balance between being persuasive on one hand, and avoiding any hint of personal attack on the other. Probes and suggestions must occur in an atmosphere of acceptance. Beliefs and behaviors that direct symptomatic behavior need to be connected to more general and often implicit schemas referred to as underlying assumptions (Beck, 1976), higher-order implicit meaning (Cooper, 1997), or schematic models (Garner et al., 1997).

Although different therapeutic orientations have been recommended in the treatment of eating disorders, empirical evidence for the utility of cognitive-behavioral methods compel the competent clinician to have mastery of the basic techniques. The clinician should be familiar with cognitive interventions, such as *decentering, challenging dichotomous reasoning, and decatastrophizing* that have been adapted to deal with the thought content of those with eating disorders (Garner & Bemis, 1982; Garner et al., 1997).

Decentering involves the process of evaluating a particular belief from a different per-spective to appraise its validity more objectively. It is particularly useful in combating ego-centric interpretations that the patient is central to other people's attention. For example, one patient reported "I can't eat in front of others in the residence cafeteria because others will be watching me." First, it needs to be established that the eating behavior is not indeed unusual. If not, then the therapist might inquire: "How much do you really think about others' eating? Even if you are sensitized to their eating, how much do you really care about it except in the sense that it reflects back to your own eating? Even if your behavior was unusual, do others *really* care?" In examples like this, decentering can be useful in reducing worry and anxiety.

Dichotomous reasoning (all-or-none or absolutistic thinking) is a common problem applied to food, eating, and body weight by those with eating disorders. For example, it is common for patients to believe that foods containing sugar are bad, eating food after a certain time of the day will lead to weight gain, or gaining a pound is a sign of complete loss of control. This style of thinking is applied to topics beyond food and weight. Patients commonly report extreme attitudes in the pursuit of sports, school, careers, and acceptance from others. This type of reasoning is particularly evident in the beliefs about self-control. Common examples include: "If I am not in complete control, I will lose all control;" "if I become angry, I will lose control of my emotions;" "if I experience pleasure, I will be dominated by hedonism;" "if I relax, I will become lazy." A major therapeutic task is to teach the patient to recognize this style of thinking, examine the evidence against it, evaluate its maladaptive consequences, and subsequently, practice adopting a more balanced lifestyle.

Decatastrophizing was originally described by Albert Ellis (1962) as a strategy for challeng-ing anxiety that stems from magnifying negative outcomes. It involves asking the patient to clarify vague and implicit predictions of calamity by probing with questions such as: "What if the feared situation did occur? Would it really be as devastating as imagined? How would you cope if the feared outcome does occur?" Ironically, catastrophizing can actually produce the feared outcome. In an attempt to avoid social rejection and isolation, patients may withdraw from all social interactions, thus becoming isolated. Fear of failure can lead to the scrupulous avoidance of risk which results in failure. Moreover, there is no relief from catastrophic think-ing. If a patient believes gaining weight would be a catastrophe, it is clear why they would be fearful and anxious when they experience weight gain. What is less obvious to the patient is that even when the fears are avoided in the short-term, it does not completely eliminate anxiety as there is a risk for the perceived calamity to develop in the future. In addition to helping the patient temper dire forecasts about the future, the therapist can facilitate the development of coping plans for mastering feared situations if they were to occur.

10.7 Expert Competencies of the Clinician

The categorical distinction between basic and expert clinician competencies is somewhat artificial, as nuance and complexity can be applied to even the most basic topics areas. For

example, meal planning may seem quite straightforward in its basic form; however, a patient's objections to meal planning may be related to a myriad of underlying or core self-concept deficits, cognitive vulnerabilities, or interpersonal themes rather than a simple lack of information. For example, describing or implementing meal planning can lead to resistance that reflects complex family dynamics related to control, and simply providing information without awareness of the underlying interpersonal themes would only intensify the conflict and subterfuge therapeutic recommendations. The distinguishing feature of the expert clinician is the ability to identify the relevant themes and then creatively implement effective interventions that address the complex determinants of behavior.

10.7.1 Understanding the Multiple Functions of Eating-Disorder Symptoms

Regardless of the conceptual framework used in therapy, there is a general agreement that eating disorders and their symptoms can serve multi-level adaptive functions across the heterogeneous patient population (Cooper, 2005; Garner et al., 1997; Vitousek, 1996). At the most basic level, these can be understood in reinforcement terminology. One factor responsible for the intransigence of eating-disorder symptoms is that they are maintained by positive internal and social contingencies. They have been described as eliciting feelings of accomplishment, pleasure, power, and pride (Bemis, 1983; Vitousek et al., 1998). It is not uncommon for patients to strive for and then cling to an "anorexic identity," because the disorder or symptoms of the disorder such as dietary restraint and exercise have acquired such a positive connotation in Western society. The strength of the positive connotation that has been placed on eating-disorder symptoms by some is reflected by the popularity of the so called "pro-anorexic" websites that brazenly extol the virtues of eating disorders as a "lifestyle" rather than a serious illness. Eating-disorder symptoms can also have a negatively reinforcing function, in that they allow the patient to prevent, avoid, or diminish unpleasant feelings. Examples include negative emotions, conflict, and anxiety, as well as a mature body shape that may be associated with fears or developmental expectations for which the patient feels unprepared. Self-starvation can also serve as an "organizing" function, particularly in obsessive patients. Starvation tends to direct thinking toward specific cognitive content domains related to food. This may not only have a positively reinforcing effect on an individual with obsessive preference for order, exactness, and sameness, but it may also accommodate a rigid information-processing style by narrowing focus in a predictable manner.

10.7.2 Advanced Cognitive Interventions

The therapist tends to take the lead in early cognitive interventions by probing the implications of specific behaviors and then gently countering them with information within pertinent arguments. This strategy quickly reveals the content and intensity of dysfunctional beliefs and thinking patterns that pertain to more fundamental underlying assumptions, schemas, and core beliefs that drive maladaptive behaviors. These cognitive schemas (relatively stable cognitive structures that organize and interpret new information) are by nature resistant to change often reflecting information biases (e.g., selective abstraction, overgeneralization, magnification

of negative events, dichotomous reasoning, or personalization) that may be biologically and genetically determined, as in the case of perfectionism reviewed in the following section. Shifts in the fundamental information-processing styles and the core beliefs that they support depend heavily on the development of a positive therapeutic relationship as well as a high level of therapeutic skill. Movement away from familiar but dysfunctional thought patterns is a gradual process that may require months or even years practicing the application of new modes of thinking in many different situations. It is essential to remain mindful of the inherent links between cognitions and behavior. Putative shifts in beliefs that are not accompanied by associated behavioral change may be viewed with skepticism. Advanced cognitive interventions involve behavioral experiments and exercises that are molded to reinforce as well as corroborate cognitive shifts in emergent belief structures. Behavioral exercises molded to reinforce new models of thinking are gradual and are often performed with trepidation on the part of the patient; therefore, the clinician must play a vital role in encouraging and reinforcing the pursuit of adaptive and healthful goals throughout the course of treatment.

10.7.3 Anxiety, Obessionality, and Perfectionism

Those with eating disorders have been shown to have an elevated lifetime prevalence of several anxiety disorders, including simple phobia, social phobia, panic, and OCD (Halmi et al., 1991; Perdereai, Faucher, Wallier, Vibert, & Godart, 2008; Toner, Garfinkel, & Garner, 1988). These reviews have led to the conclusion that anxiety disorders may represent a genetically mediated pathway to the development of eating disorders. Those with eating disorders tend to display only some obsessional target symptoms, such as need for order, symmetry, exactness, and arrangement, rather than obsessive checking or sexual obsessions common among others with OCD (Perdereai et al., 2008).

Perfectionism has been found to precede the onset of eating disorders, is present during the acute phase, persists well after recovery, and runs in families (Bulik et al., 2003; Franco-Paredes, Mancilla-Diaz, Vasquez-Arevalo, Lopez-Aguilar, & Alvarez-Rayon, 2005). There is considerable debate about the definition and structure of perfectionism as it relates to eating disorders; however, "high personal standards," "doubts about actions," and "concern over mistakes" have been identified as core constructs in a multi-conceptualization of perfectionism (Tozzi et al., 2004).

The central role that anxiety and worry plays in the development and maintenance of eating disorders has practical implications on clinicians aspiring to achieve expert competence in the treatment of these patients. In addition to understanding the idiosyncratic fears and worries experienced by those with eating disorders, it is also important for the clinician to be well-versed in both the theory and practice of treating those with severe anxiety disorders.

Behavioral methods of desensitization and graded exposure as well as their cognitive foundations are central elements of therapy. In the area of behavioral change, patients experience intense and sometimes debilitating fear with attempts to change eating patterns and gain weight. If patients are to recover, they must begin making behavioral changes in these areas. The experienced therapist is able to provide support and encouragement, as well as generate persuasive arguments for making behavioral change in the presence of extraordinary anxiety. This is one area in which specialized training is essential. The "irrational" nature of the danger or threat experienced by most anxious or phobic patients (e.g., fear of flying, social phobia, panic, agoraphobia, hand washing) may be evident to even the untrained health professional,

although the techniques for ameliorating the problem usually require technical expertise. However, the erroneous thinking behind many of the fears expressed by those with eating disorders is not always obvious and may even be shared by a therapist who has not had specific training (e.g., "dietary fat is bad – if I eat dietary fat, I will gain weight;" "I cannot allow myself to eat certain foods or I will lose control;" "I must take laxative so the food is not absorbed;" "I cannot eat more than 1,000 Calories or I will gain weight and become obese;" "if I eat 100 extra calories a day, I will gain 10 pounds a year;" "my body will get used to restricting to fewer calories;" "I am terrified of eating any sweets because they make me binge-eat;" I am frightened to eat after 6:00 pm because the food will turn to fat;" I must exercise an hour a day or I will gain weight"). As mentioned earlier, psychoeducation can be used to challenge certain irrational beliefs and assumptions associated with idiosyncratic eating behaviors (Garner, 1997). However, exposure through behavioral change is necessary to probe, challenge, and provide "evidence" to correct faulty assumptions regarding eating, weight, and related self-attributions. For example, it is probably more difficult to maintain the belief that you cannot eat dietary fat or sugar without binge-eating if you indeed consume these substances without losing control. Similarly, behavioral change can have a profound effect on the beliefs in other areas that are not directly related to food and weight. Successful social interaction can attenuate the view of self as socially incompetent. Independent and self-reliant behavior interferes with personal and family schemas that foster over-protectiveness and excessive dependence. However, it should be noted that with more fundamental belief systems, such as those related to negative self-evaluation, it is possible for well-established beliefs to remain intact, despite undeniably contradictory behavior. Again, it is important for the therapist to make sure that the implications of the behavioral change are integrated at the cognitive level.

10.7.4 Body Image: Reattribution Techniques

Misperceptions related to weight and shape do not characterize all patients with eating disorders; however, a significant proportion of patients appear unable to accurately appraise their body. There are no reliable methods for directly modifying body-size misperception in eating disorders. Rather than correcting size misperception reported by some patients, it is useful to reframe the interpretation of the experience (Garner et al., 1997). This involves interrupting and overriding self-perceptions of fatness with higher-order interpretations, such as "I know that those with eating disorders cannot trust their own size perceptions" or "I expect to feel fat during my recovery, so I must consult the scale to get an accurate reading of my size." The therapist can ask the patient to attribute these body self-perceptions to the disorder, and to refrain from acting upon intrusive thoughts, images, or body experiences. This approach is contrary to the general therapeutic goal of encouraging self-trust in the validity and reliability of internal experiences.

10.7.5 Modifying Self-Concept

Self-concept is a multidimensional construct involving at least two sub-components: self-esteem and self-awareness. Self-esteem constitutes the appraisal or evaluation of personal value, including attitudes, feelings, and perceptions. In contrast, self-awareness relates to the perception

and understanding of the internal processes that guide the experience. Vitousek and Ewald (1993) have organized self-concept deficits that are characteristic of eating disorders into three broad clusters of variables: the unworthy self, the perfectible self, and the overwhelmed self. The *unworthy self* is characterized by (1) low self-esteem, (2) feelings of helplessness, (3) a poorly developed sense of identity, (4) a tendency to seek external verification, (5) extreme sensitivity to criticism, and (6) conflicts over autonomy/dependence. The second cluster, the *perfectible self*, includes (1) perfectionism, (2) grandiosity, (3) asceticism, and (4) a "New Year's resolution" cognitive style. The third cluster, the *overwhelmed self*, is characterized by (1) a preference for simplicity, (2) a preference for certainty, and (3) a tendency to retreat from complex or intense social environments. The expert clinician should have a good working knowledge on self-concept deficits and methods of modifying it in those with eating disorders.

10.7.6 Improving Self-Esteem

As mentioned earlier, it is well recognized that poor self-esteem often predates the appearance of eating-disorder symptoms (Jacobi et al., 2004; Stice, 2002). The pride and accomplishment of weight control seem to temporarily alleviate low self-esteem, particularly in adolescents coming from families that place greater emphasis on appearance (Senra, Sanchez-Cao, Seoane, & Leung, 2007). Correction of low self-esteem, particularly, if pervasive and long-standing, is a time-consuming process. At the beginning of the therapy, it may be expressed in vague terms such as general feeling of ineffectiveness, helplessness, or lack of inner direction. Over time, the therapist needs to help the patient distill vague assumptions about self-worth into a clear and simple statement such as "I feel like a failure," "I do not feel like a worthwhile person," or "I must be liked by others in order to feel good about myself." Once the patient has expressed the view that he or she has low self-worth, it is useful to engage in a more general discussion about the basis for self-worth, later applying what has been learnt back to particular index situations identified by the patient. It is often useful to begin by noting how much time and energy most people devote in trying to evaluate their self-worth. For most patients, weight or shape has become the predominant gauge for inferring self-worth. It is possible to determine the pros and cons of this frame of reference and then to extend this to other behaviors, traits, or characteristics employed in the process of self-evaluation following the procedures described by Burns (1993).

10.7.7 Difficulties in Labeling and Expressing Emotions

Cognitive theorists have attributed this tendency to idiosyncratic beliefs, assumptions, or schemas that eating-disorder patients use in evaluating inner state (Garner & Bemis, 1985). These beliefs commonly center on attitudes about the *legitimacy*, *desirability*, *acceptability*, or *justification* of inner experiences. The following comments by patients are clues to the operation of this process: "I do not know how I feel; how should I feel?," "I do not experience pleasure; I never feel angry," "I am always energetic and never get tired," "I admire others who don't show their feelings," "I can't stand these feelings – they are too strong," "I don't feel anything – I just binge." Asked about feelings in a family interview, one patient appeared confused and responded by pointing to her mother stating: "ask her, she knows me better than I do." Similar mislabeling can be applied to other sensations like pleasure, relaxation, or sexual feelings. Patients

commonly interpret these sensations as "wrong," frivolous, or threatening. One patient reported: "If I give in to the urge to relax, I will become a degenerate." Once distorted meanings are revised, it is important for the therapist to encourage behavioral exercises to reinforce and legitimize the new interpretations.

10.7.8 Interpersonal Focus in Therapy

Interpersonal concerns are inevitably expressed by eating-disorder patients during the course of therapy. The prominence of interpersonal schemas has been the basis for their inclusion in earlier cognitive approaches to the disorder (Garner & Bemis, 1985; Garner et al., 1997). Self-schemas and interpersonal schemas both influence and are influenced by interactions with others. Although the interpersonal focus to therapy requires a shift in therapy content, the systematic reliance on standard cognitive procedures continues. Patients tend to apply the same types of schematic processing errors and dysfunctional assumptions to interpersonal relationships as those displayed in other areas (Cooper, 2005).

Cognitive therapy generally eschews the exploration of historical individual material; however, this approach can also be therapeutic in examining interpersonal schemas. First, it is sometimes necessary to examine historical relationships to find recurrent interpersonal patterns. Second, it can be useful for patients to develop some understanding of the historical events and relationships that may have made particular interpersonal schemas "adaptive." Understanding the earlier adaptive context can allow the patient to make sense of the current dysfunctional interpersonal schemas. Therapy sessions provide in vivo opportunities to assess dysfunctional interpersonal schemas that may generalize outside the therapy. For example, the patient might be encouraged to examine beliefs that interfere with assertiveness and then practice assertiveness in the therapy session. The therapist and the patient then need to plan out-of-session opportunities to apply this newly-acquired skill.

10.7.9 Family Therapy

Support for involving the family in the treatment of eating disorders comes from a number of sources. First, there are ethical, financial, and practical grounds for including the parents in the treatment of younger patients with eating disorders. Second, recovered patients consider resolution of family and interpersonal problems as pivotal to recovery (Rorty, Yager, & Rossotto, 1993). Third, this mode of intervention has received empirical support in controlled trials (le Grange et al., 2007; Russell et al., 1987).

Practical factors are sufficiently compelling to justify the family approach with some patients; however, our primary impetus for integrating family and cognitive approaches to eating disorders is the conceptual harmony that can be achieved in integrating these two treatment models (Garner & Bemis, 1985; Garner et al., 1997). At a fundamental level, there is agreement between both the models for which "meaning" is the primary locus of clinical concern. Also, both the models assume that the symptoms are adaptive at one level of meaning and dysfunctional at another. The clinician should not assume the specific meaning behind interactional patterns, but should try to assist the patient and the family in identifying dysfunctional assumptions through questioning and the prescription of behavioral change.

The following example illustrates multi-level beliefs. One patient did not understand why she was so angry at her mother's cheerful and congenial manner until she realized that it was really insincere. This patient communicated her anger in her conflict-avoidant family by vomiting, claiming that her behavior was involuntary. The clue to the meaning of her behavior was that she always left the bathroom door open and retched so that all could hear. By defining her vomiting as involuntary, she denied its hostile intent and avoided reprisals.

10.8   Transition from Basic to Expert Competence

There are several important factors to consider in facilitating the transition from basic to expert competency in treating eating disorders. Expert competency requires knowledge of the theory and the application of therapeutic model being used. One of the advantages of the cognitive model of therapy is that there have been detailed manuals providing the structure, stages, content, and methods used (Cooper, Todd, & Wells, 2008; Fairburn, 2008; Garner, Vitousek, & Pike, 1997; Lock et al., 2001). Clear specification of the treatment methods allows better evaluation of how closely therapists adhere to treatment protocols. There are several other areas that are important focal points to consider in this brief discussion of transition to expert competence such as: (1) therapy skills; (2) mastery of content; (3) case conceptualization; (4) relationship factors; and (5) supervision.

10.8.1 Therapy Skills

Cognitive therapy emphasizes on collaboration, guided discovery, and structure (Beck, Rush, Shaw, & Emery, 1979), and these key elements apply to the treatment of eating disorders.

As has been mentioned repeatedly in this chapter, eating disorders are a heterogeneous group, and the competent clinician must have the ability to select the most appropriate approach that fits each patient's needs. One approach to varied patient needs has been "stepped-care," "decision-tree," or "integration" models which rely on fixed or variable rules for the delivery of the various treatment options (Garner & Needleman, 1997). According to the stepped-care model, a patient is provided with the lowest step intervention, one that is least intrusive, dangerous, and costly, even if the lowest step intervention does not have the highest probability of success. In contrast, a decision-tree approach provides numerous choice points resulting in different paths for treatment, depending on the clinical features of the patient as well as the response to each treatment delivered. The use of a combined decision-tree and integration model recommends an educational approach as the initial intervention for the least disturbed BN patients, and forms of treatment need to be integrated for more severe patients such as those with AN. Family therapy is recommended as the primary treatment modality if patients are young, living at home, or highly dependent on parents. Until recently, inpatient hospitalization was the standard treatment for patients who needed to gain substantial body weight; however, most of these patients can now be managed effectively and at substantially lower cost at the partial hospitalization program (PHP) level of care. Selecting the correct form of treatment, applying specialized content, formulating a viable conceptualization of each case, and developing a strong therapeutic relationship are necessary ingredients to achieving competency. Mastery of different therapy formats (individual, group, or family) is highly desirable depending on the work setting.

10.8.2 Mastery of Content

There has been enormous growth of the knowledge base on eating disorders in the past 20 years, and mastery of the key content domains and their clinical application is a daunting task. Moreover, the compiling of research evidence in the eating-disorder area continues to accelerate, making it challenging to stay abreast of current developments. As has been emphasized throughout this chapter, many of the educational content areas in therapy with eating-disorder patients, such as the biology of weight regulation, are not part of the standard preparation of the "generalist" therapist. Basic educational principles must be learnt; however, achieving competency involves conceptualizing the most important targets for change and then artfully interweaving educational and core cognitive content domains in an effective manner.

10.8.3 Case Conceptualization

A cornerstone of therapist competency is the ability to formulate a useful conceptualization of the core problems that apply to the patient. Understanding the specific meaning that the eating-disorder symptoms have acquired for the individual and how this meaning has changed over time is vital. This involves understanding of the present meaning that body weight, shape, and appearance has for the patient as well as the historical derivations of the meaning. For many patients, the historical source may be very different from the factors maintaining the symptoms in the present. For example, a patient may develop the eating disorder in response to being teased about weight as a child, but the current symptom picture may be driven by feelings of control and mastery. It is desirable to move beyond more generic conceptualizations to a more individualized understanding that takes into account the patient's developmental and interpersonal history as well as the key assumptions, core beliefs, and functional aspects that symptoms have acquired over time. Therapists should be encouraged to discuss tentative conceptualizations early in supervision and make refinements based on new information. It is important to determine the patient's conceptualization of the functional aspects of the eating disorder, as a shared understanding of the fundamental problems can be expected to lead to greater progress.

10.8.4 Relationship Factors

As mentioned earlier, trust in the therapeutic relationship is rated by patients as the most important component of treatment quality (de la Rei et al., 2008). Maintaining a positive therapeutic relationship can be challenging, as some patients are very resistant to making behavioral change and seem intent on sabotaging progress. However, it is beneficial to develop a good understanding of the functional aspects of the disorder and to convey this along with empathy and compassion to the patient. In a classic work on motivation for change, Vitousek et al. (1998) provided practical suggestions for understanding resistance to change, and developing empathy and validation of the patient's experience without undermining the arguments for recovery.

10.8.5 Supervision

Perhaps, the most important element in the transition from basic to expert skills as a therapist is acquiring state-of-the-art training from a skilled and experienced therapist. It is ideal to be part of a team in a multidisciplinary setting that permits live observation of the delivery of high-quality treatment as well as discussion of the rational for specific interventions. Supervision usually begins with didactic discussions and specifically designed reading material. The focus is on mastery of the therapy methods, educational content, and developing case conceptualization skills. As therapy skills develop, more attention is focused on the therapy relationship and understanding more advanced topics, such as the integration of individual and family interventions. Group therapy can be a useful training format, as it allows the less experienced therapist to benefit from real-time learning from a more skilled therapist. It is important to encourage the novice therapist to participate in the group therapy process and build on the supervisee's strengths. Another key function of supervision is to provide the less experienced therapist with an opportunity to share reactions to patients and the process of the therapy. Role playing can be effective in illustrating specific therapy skills. Videotapes can have the advantage of capturing particular themes or learning points that can be discussed in relation to specific theoretical principles. Supervision should pinpoint problem areas, identify the specific skills needed to advance competency, and provide a clear roadmap for continued training.

10.9 Summary

Therapist competency is fundamental to the success in treating most psychological disorders. However, the skills required to effectively treat eating disorders may be more demanding than many other problems, because competency requires mastery of considerable educational information about physical complications associated with eating-disorder symptoms and chronic weight suppression. The cognitive-behavioral model of treatment has become well-defined in recent years; however, the mark for therapist competency continues to rise as the knowledge base has expanded with the high level of clinical and research interest in eating disorders. The guidelines provided in this chapter are intended to provide a springboard for the training and supervision to improve patient care.

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11 Substance Use Disorders

Brad Donohue · Kendra Tracy · Ashli J. Sheidow

Abstract: Although adolescent substance abuse has decreased during the past decade, its consequences to family, society and youth who abuse substances are devastatingly problematic. Youth afflicted with this disorder are often highly resistant to treatment and pose unique challenges to therapists, including difficulties achieving diagnostic accuracy, rapport, and development of social support networking. To address these difficulties clinical research involving adolescent substance abuse has become increasingly sophisticated during the past decade, resulting in a growing body of knowledge and skill sets in mental health professionals treating this disorder. Therefore, this chapter begins with a full description of the disorder, including various co-occurring problem behaviors, prevalence and important issues leading to its development and maintenance. We then underscore evidence-based methods that have been found to effectively identify, formally diagnose, and functionally assess substance abuse in adolescents. We also describe factors that often complicate treatment planning, as well as solutions to these problems. Evidence-based treatments for adolescent substance use are reviewed, particularly family- and behavioral-treatments, due to their efficacy. Finally, clinical and administrative competency is extensively reviewed, both in the degree to which mental health professionals progress from novices to experts, as well as the progression that naturally and empirically occurs from the point of intake to treatment termination. Given the emphasis on empirical skill development in this chapter, we review several training models that have demonstrated effectiveness in competency at the novice and expert level.

11.1 Substance Abuse and Dependence

11.1.1 Overview

This chapter underscores the scientific literature of Substance Abuse and Dependence, as relevant to clinical competence. We begin with a brief review of the diagnostic criteria for these disorders, and outline their prevalence, course, risk factors, and useful strategies in the assessment of their clinical symptoms. Given the inherent bias of participants to conceal substance use, we emphasize on the assessment strategies that are relevant to its identification, including biological testing and self-report screening instruments. We also provide a brief review of the underlying mechanisms involved in maintenance of substance-abusive patterns of behavior, and evidence-supported psychological methods used to treat these problem behaviors. In conclusion, the recent developments in the assessment and training of clinical competence allow a broad range of issues to be described that are relevant to clinical competence as applicable to substance abuse and dependence.

11.2   Overview

11.2.1 Diagnostic Features

As defined by the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*; American Psychiatric Association, 2000), substance abuse and dependence are the two most frequently occurring substance disorders. Substance abuse is less severe, and includes a maladaptive pattern of substance use leading to clinically significant impairment. Such problems include fulfilling major role obligations owing to substances, using substances in dangerous situations, legal problems, or continued use despite persistent or recurrent social or interpersonal problems. Substance dependence is more severe, and is often indicated when physiological symptoms are experienced, such as tolerance and withdrawal. Symptoms of dependence include unsuccessful efforts to lower or control the frequency of use, spending excessive amounts of time in activities necessary to obtain, use, or recover from substance use, withdrawal from important social, occupational, or recreational activities, and continued use despite having persistent physical or psychological problems.

11.2.2 Prevalence, Course, and Risk Factors

Overall, adolescent substance abuse has been declining gradually since 1999. However, lifetime prevalence of illicit substance use among adolescents is still relatively high at 47% (Johnston, O'Malley, Bachman, & Schulenberg, 2008). Marijuana is the most prevalent and easily accessible drug, and thus is most resistant to trends of declining use. High levels of marijuana use in adolescence are related to poor academic achievement and degree attainment, higher rates of unemployment and dependence on welfare, and poorer relationship quality (Fergusson & Boden, 2008a, b). Misuse of prescription pills or other medications, such as cough syrup, has been on the rise among adolescents since 1999, although recent reports have shown that this rate is decreasing or holding steady (see Johnston et al., 2008 for a review). With nearly 20% of the eighth graders reporting drug use at some point in their lifetime, the problem of adolescent substance abuse remains a major concern.

Early onset of substance abuse is related to higher rates of mental-health problems (e.g., depression, anxiety, Attention Deficit Hyperactivity Disorder), and higher rates of drug use in late adolescence and young adulthood (Fergusson & Boden, 2008a, b; Teesson, Degenhardt, Toumbourou, & Loxley, 2005). Adolescents who use substances have a higher mortality rate and are more likely to engage in risky behaviors, such as unprotected sex, which puts them at risk of pregnancy and contracting HIV and other sexually transmitted diseases. In addition, adolescents' brains may be more susceptible to the effects of substances than adults, with early use resulting in brain abnormalities, structural damage, and cognitive impairments (Lubman, Yucel, & Hall, 2007). Though some of the effects of substance use are temporary, with chronic use, the effects of substance use may be irreversible.

Effects of substance abuse can be severe. Therefore, it is important to recognize adolescents who may be at particular risk for substance use, so that prevention measures can be initiated early in the developmental process. Risk factors may be manifested in the adolescent's community, peer group, family, or in the adolescent's own characteristics, such as a preference for novelty or sensation seeking. Poverty or living in a poverty-stricken area is often associated with drug use. Along a different vein, substance-using peers have consistently been identified

as one of the strongest predictors of adolescent substance abuse. In addition, a history of substance abuse in the family puts the adolescents at risk. This effect is not simply owing to modeling or social learning, as a genetic component has been indicated demonstrating that patterns of substance abuse in families can be transmitted up to three generations (Fergusson, Boden, & Horwood, 2008). Children who have been physically or sexually abused are at risk of developing substance-use problems. Indeed, many adolescents report that they begin using substances to help them cope with mistreatment, and continue to use substances for many of the same reasons (Titus, Godley, & White, 2007).

11.3 Recognition of Symptoms and Their Assessment

Elimination of problem behaviors associated with substance abuse and dependence generally follows a consistent course of action. First, it is necessary to recognize when substance use is problematic, or conservatively speaking, when it has the potential to become problematic. Among other reasons, recognition of the symptoms of substance disorders in adolescents is often difficult to assess, because societal punishments are usually initiated when substance use is discovered (e.g., fines, arrests, antipathy), the symptomatic presentation varies across drugs, and there is sometimes poor recall of events owing to memory impairments influenced by substance use. Physical effects of drug use are perhaps the most recognizable, such as dilated pupils, poor motoric coordination, or slurred voice. However, these indicators are often caused by factors that are not associated with substance use, and often vary according to the type of substance ingested. For example, cocaine, a stimulant drug, is known to enhance euphoric feelings and thereby increase the activity levels, whereas depressant drugs (e.g., benzodiazepines) are often used for their relaxing effects, resulting in decreased levels of activity. The immediate physical symptoms of drug use are also relatively short-lived and usually have an abrupt onset. As such, it can be difficult to verify the presence of symptoms because they can be easily disguised or hidden. For instance, bloodshot eyes can be masked by wearing sunglasses or avoiding going home until the drug effects wear off. Therefore, professionals and family members working with adolescents who are suspected of substance abuse should become familiar with symptoms of specific types of drugs. Professionals may gather this information from research-supported manuscripts (e.g., Physician's Desk Reference, 2009), whereas family members may find reputable Internet websites particularly valuable. Along this vein, the National Institute on Drug Abuse has an interactive website that underscores factual information about illicit drugs, reports testimonials from youth who have experienced drug abuse, and includes electronic quizzes relevant to knowledge of drug symptoms (see NIDA for Teens; teens.drugabuse.gov).

Changes in behavior and relationships may be indicative of problematic substance use. These include changes in appearance (e.g., decrease in hygiene), delinquency, difficulty remembering recent events, changes in appetite (which may lead to marked weight gain/loss), changes in sleep patterns, bizarre behavior or speech (i.e., paranoia), and inappropriate affect. Substance abuse also negatively affects the academic performance, as school may be missed to recover from the effects of substance use or school may be avoided to use substances. Drug use also indirectly exacerbates school performance by negatively influencing motivation for self-improvement, and causing difficulties with memory and concentration. Indeed, drug use may be prioritized over school, with increasing time spent on drug-related activities and less time

for schoolwork. Therefore, a sudden drop in grades or an increase in absenteeism is common among adolescents who abuse substances. An abrupt increase in behavior problems may also occur, particularly at home and school where adolescents spend much of their time. Drug abuse may influence adolescents to change their peer structure, spend more time engaged in activities with other drug uses, and perhaps become delinquent youth. There may be a noticeable lack of motivation or loss of interest in activities that were once enjoyed, resulting in stressed relationships with family members and friends who do not approve of drug use. When adolescents who have not evidenced family problems begin isolating themselves from their family or make new friends who are not introduced to the family, this may be indicative of substance abuse.

Adolescents who abuse substances also evidence emotional or attitudinal changes, including feelings of being disconnected from others, emotional lability, or marked changes in mood. Indeed, drug abuse may influence adolescents to engage in frequent angry outbursts in response to ordinary events. Some may show signs of depression, cry often or without warning, report feeling of sadness or hopelessness, or experience worrisome thoughts that are excessive.

Symptoms of substance abuse are similar to those of other psychological disorders, and hence differential diagnosis is difficult, albeit essential. There are several comorbid conditions frequently associated with substance abuse and dependence in adolescents. These include disorders of conduct, depression, impulsivity, and anxiety (Azrin et al., 2001). Indeed, between 30% and 60% of drug users are estimated to evidence a coexisting mental-health condition (Leshner, 1999). It is important to assess how these conditions interact to influence the onset, course, and severity of substance use. As peer relationships and school-related pressures are salient to adolescents, it is useful to adopt a systemic and thorough assessment of developmental, family, and academic histories, current social and psychological functioning, and the sociocultural milieu to obtain a clear picture of the presenting problem. Along these lines, it is recommended to use a variety of assessments from a variety of informants, whenever possible.

The assessor should be familiar with commonly used psychoactive substances, their street names, and their effects. The National Institute of Drug Abuse [NIDA] has compiled a comprehensive list of illicit substances, their street names, methods of ingestion, and their associated intoxicating effects and health consequences that is available on their website (NIDA, 2008). With nearly 25% of eighth graders reporting use of an illicit substance, it is important that screening for substance use begin early. The American Medical Association (AMA) recommends screening for substance use in elementary school with continued assessment on a yearly basis (AMA, 1997). Another approach involves screening youth who are particularly at risk for substance disorders, including those identified to use alcohol and drugs. Primary psychometric methods of identifying youth who may be using or abusing substances include biological testing of urine, saliva, blood, and hair follicles (also breath in the case of alcohol), and self-report screening measures. Biological tests yield rapid results, and are relatively easy to administer. However, they are sometimes considered invasive by those being tested, and are often unable to detect when the use has occurred owing to the time of test administration being too far from the time of substance use or because of the use of adulterants (some of which are undetectable). Biological testing is limited in its ability to indicate the extent and circumstances of substance use, as well as when the detected substances were used. However, it is the gold standard objective measure of substance use, particularly in adolescents.

Self-report screening instruments are often developed to identify risk and protective factors relevant to substance abuse and dependence. Psychometrically-validated screening instruments include the Problem-Oriented Screening Instrument for Teenagers (POSIT; Latimer,

Winters, & Stinchfield, 1997); the Drug Use Screening Inventory (DUSI; Kirisci, Tarter, & Hsu, 1994; Thomas, 1990); the Personal Experience Screening Questionnaire (PESQ; Winters, 1992); and the Drug and Alcohol Problem – Quick Screen (DAP; Schwartz & Wirtz, 1990). The afore-mentioned scales are relatively brief (e.g., requiring from 10 to 40 min to complete), and most provide subscales that may be used to assist in the assessment of co-morbid constructs that are relevant to treatment planning. The Time-Line Follow-Back procedure (Sobell & Sobell, 1996) may be used to obtain an estimate of the frequency of substance use. In this method, a month-by-month calendar for the time period of interest (i.e., usually 4–6 months prior to the day of assessment) is utilized. Significant memory anchor points (e.g., birthdays, family activi-ties) are recorded on the calendar to facilitate recall of the days on which the substances were used. Adolescents are asked to indicate on the calendar the days on which illicit drugs and alcohol were used. Additionally, reports of frequency of substance use are obtained from col-lateral sources, typically a parent, thus, greatly enhancing the sensitivity of this measure to detect substance use. Psychometric properties of this scale are very good, as it has been found to significantly correlate with urinalysis testing and measures of behavior problems that have been negatively influenced by substance abuse in adolescents (Donohue, Hill, Azrin, Cross, & Strada, 2007).

Although self-report screening instruments have been shown to be relatively reliable and valid in determining adolescents who are likely to evidence substance abuse and dependence, most provide limited information that is directly relevant to treatment. Therefore, when substance abuse is suspected, clinical interviews may be used that have established psychometric support. For instance, the Structured Clinical Interview for Adolescents (SCI; Brown, Vik, & Creamer, 1989) is a psychometrically-validated semi-structured interview that yields information relevant to diagnosis and treatment planning. As it is directly relevant to substance use, this interview may be utilized to assess the desire to eliminate substance use and family history of substance use. Other topics include interpersonal relationships, academia, psychological functioning, and peer behavior. The Structured Clinical Interview for DSM-IV diagnosis (SCID-IV; First, Spitzer, Gibbon, & Williams, 1997) is more diagnostically focused than the SCI, and may be utilized to assess the major AXIS I mental disorders in the DSM-IV-TR, including substance abuse and dependence that are important to consider in treatment planning. The SCID-IV has good validity and reliability (Williams et al., 1992), but requires substantial training, and is relatively less flexible than the SCI. Nevertheless, structured (e.g., SCID) and semi-structured (e.g., SCI) clinical interviews may be used to assist in determining areas warranting comprehensive assessment (e.g., pathological symptoms that co-exist or over-lap with substance abuse and dependence), particularly when these methods are combined with other self-report measures and unstructured interviews.

11.4 Maintenance Factors of Substance Abuse and Dependence

Substance abuse and dependence in adolescents are often maintained by antecedent stimuli that precede drug use and positive consequences occurring after drug use. Stimuli may influ-ence drug use explicitly through reinforcement, or indirectly owing to their past associations with drug use. Direct or explicit influences are usually more obvious, and include modeling by adolescent peers, encouraging and praising drug use, providing drugs, and mandating drug use as a right of passage or initiation (e.g., gang involvement). Indirect influences contribute to

drug use through classical and higher-order conditioning, and are particularly difficult to assess because the extent of their influence is often unknown. For example, mere presence of peers may stimulate drug urges owing to their previous positive associations with drug use at parties. Specific places (e.g., street signs, bathrooms) and objects (e.g., drug paraphernalia, cash) that have become associated with drug use are notorious "triggers" for future drug use, as are situation-specific antecedents (e.g., being expelled from school, boredom, excitement, various celebrations). Adolescents may also use illicit drugs and alcohol when they encounter aversive stimuli (e.g., arguments, death of a loved one, physical pain, and illness), thereby removing aversive states and maintaining future drug use through the process of negative reinforcement. Conversely, people who are associated with abstinence from drugs usually act to buffer against drug use, as these individuals are more likely to engage in non-drug associated activities (e.g., sport activities, homework) at places that are incompatible with drug use (e.g., school, family home).

There are various contextual factors that act to facilitate or inhibit drug use. For instance, community factors may include culture, neighborhood characteristics, presence of violence, and availability of drugs in the community. When drugs are readily available, it becomes much more difficult to achieve or maintain sobriety. In support of this finding, Schiffman (2004) found that one of the strongest predictors of marijuana use was the availability of drugs. Indeed, adolescents were seven times more likely to have used marijuana in the past year if they had been given the opportunity to buy drugs. When availability is combined with other risk factors, adolescents may be particularly vulnerable to drug use. For example, many adolescents who have been found to abuse drugs lack assertiveness skills in refusing substances, including difficulties generating alternative actions to drug use (Donohue, Van Hasselt, Hersen, & Perrin, 1999). Thus, neighborhoods and schools in which drug users and drug dealers are part of the culture are likely to maintain substance abuse.

Social factors are also very important in the maintenance of adolescent drug use. For example, arguments occurring between family members may distract parents from focusing on the problems of their youth. Permissive parenting styles may lead to inadequate monitoring of youth, which appears to be associated with greater rates of marijuana use (Lockman, 2003). Parental modeling of substance use also acts to trigger drug use in their children (Fergusson, Boden, & Horwood, 2008). Conversely, rewarding youth for non-drug associated behavior appears to be an effective parenting strategy in the reduction of substance use in adolescents (e.g., Azrin, Donohue, Besalel, Kogan, & Acierno, 1994). Peers may assist in maintaining substance use through acceptance of drug use, modeling of drug use, making drugs easily available, or may interfere with the implementation of social consequences for drug use by authority figures (e.g., hiding drug use paraphernalia). In understanding the role that adolescent peers play in maintaining adolescent substance use, it is important to understand that these youth often fail to recognize the severity of drug-use problems (Sheidow & Henggeler, 2008). Thus, it makes sense that family and friends should be involved in the treatment plan when working with adolescents who have been identified to abuse drugs.

11.5   Evidence-Based Treatment Approaches

The evidence base for the treatment of adolescent substance abuse includes family-, individual-, and group-based models (see reviews by Austin, Macgowan, & Wagner, 2005; Bender, Springer,

& Kim, 2006; Deas, 2008; Muck et al., 2001; Strada, Donohue, & Lefforge, 2006). A recent comprehensive report by Waldron and Turner (2008) reviews the research findings for evidence-based treatments for adolescent substance abuse. The report provides a thorough summary of the "state of the field" and a useful framework for discussing the evidence-based treatment approaches for this population. Thus, the following is a brief synopsis of various evidence-based treatment approaches for adolescent substance abuse. Specific information about many of these treatment programs is available through the National Registry of Evidence-based Programs and Practices (NREPP), which is a service of the Substance Abuse and Mental Health Services Administration (SAMHSA), or the National Institute on Drug Abuse, both of which can be found online (www.nrepp.samhsa.gov and www.nida.nih.gov, respectively). These searchable databases are continually updated with new research findings.

The majority of clinical trials for adolescent substance abuse has evaluated family-based treatments, and in their meta-analysis of family treatments for drug abuse, Stanton and Shadish (1997) suggested that such approaches may be more efficacious than individual and group therapies for both adults and adolescents. Family-based approaches with clinical trial findings highlighted in the Waldron and Turner (2008) review, for instance, include Family Behavior Therapy (FBT), Brief Strategic Family Therapy (BSFT), Functional Family Therapy (FFT), Integrated Behavioral and Family Therapy (IBFT), Multidimensional Family Therapy (MDFT), and Multisystemic Therapy (MST). Delivery for these treatment models range from intensive, home-based treatments preventing out-of-home placement (e.g., in inpatient or detention facilities) to office-based approaches, and they may include both family and individual sessions. Although each of these models is too complex to describe here, some of their features are reviewed as follows.

A noteworthy characteristic of most of these family-based treatments is an emphasis on engaging families into treatment. For nearly all of these treatment models, therapists are active when it comes to engagement, compared with passive strategies often employed in community practice. Some of the models have a phase of treatment dedicated to building client engagement, while other models maintain engagement as an underpinning aspect of treatment which must be present for the remaining aspects of treatment to be successful. Therapists are taught skills and techniques for obtaining and increasing engagement, which may include verbal and nonverbal therapist behaviors, as well as pragmatic strategies like home visits, telephone enlistment and engagement calls, pre-treatment engagement meetings at public locations, and convenient scheduling.

Also common among most of these research-based family approaches is the use of a family system's perspective to conceptualize adolescent substance abuse. That is, members within the family, including the adolescent substance abuser, should interact with one another to potentially influence and sustain substance-abuse problems. Some of the family-based treatments extend this even further by taking an ecological perspective, with individual factors (e.g., coping, motivation), family factors (e.g., relationships, communication patterns, discipline practices), and external systems (e.g., peer, community) combining to produce and sustain the adolescent's substance-abuse problems. Such approaches to conceptualization and treatment planning are consistent with the developmental research on the correlates and causes of adolescent behavior problems, whereby the risk and protective factors have been identified across individual, family, peer, school, and community contexts. Thus, considering factors from multiple areas of the youth's ecology, and developing treatment plans to target various areas appears to be a useful component of family-based treatments for adolescent substance abuse.

Approaches to treating adolescent substance abuse usually rely on a combination of specific interventions implemented by the therapist or treatment team. However, the specific interventions employed vary. Nevertheless, there do appear to be some commonalities. Many of the family-based approaches rely on structural and strategic family therapy techniques. Detailed descriptions of these techniques are presented in studies such as Minuchin (1974) and Haley (1987), and generally are learnt through extensive training and supervision. These techniques aim to alter maladaptive family interactions, such as dysfunctional family boundaries, hierarchies, and alliances. In some of these family-based models, poor communication sequences among family members are targeted. Thus, training families to communicate more effectively and frequently is a common target for some evidence-based family models.

Some ecologically-focused models attempt to increase the instrumental and emotional support for the adolescent's caregivers through leveraging key participants in the family's lives, thereby alleviating stressors that might prevent caregivers from effective parenting. Generally, the family-based models with empirical support view each family as unique and attempt to individualize treatment to capitalize on family strengths and reduce family weaknesses. For example, a family with a supportive grandparent, but one who is undermining a parent's limit-setting with the adolescent would be leveraged without eliminating the supportive role that the grandparent could continue to play. The essence of most of these models is that there is no "one size fits all" family or ecology. Thus, treatments generally follow sets of coherent principles and utilize a prescribed set of interventions without taking a cookbook approach to therapy.

Often, the family-based treatments include training caregivers to implement behavior modification techniques. For some of the family-based models highlighted in the Waldron and Turner (2008) review, behavioral interventions are the primary focus. In general, behavioral interventions for family-based approaches to adolescent substance abuse include (a) the family setting clear expectations (e.g., the youth will eliminate substance use); (b) the family setting clear contingencies for behaviors that are relevant to substance use that they can apply consistently and as temporally close to the behavior as possible; and (c) accurate monitoring of behavior (e.g., using urine drug tests in addition to self-reports from adolescent clients and significant others whenever possible). Expansions of these behavioral interventions may include variants of a functional analysis (for instances of drug use) that aims to identify the antecedents and consequences of use, thereby providing the family and therapist with additional contextual variables to target, such as improving supervision through contingency management systems, family communications skills training, management of stimuli that place youth "at-risk" to use substances, and teaching drug refusal skills. Thus, many of these family-based models incorporate both behavioral and cognitive-behavioral strategies for treating adolescent substance abuse.

Effectiveness of these cognitive-behavioral techniques also has been supported for use in individual- and group-treatment approaches for adolescent substance abuse. The cognitive-behavioral therapy (CBT) approaches that had empirical support generally include 12–16 h of therapy, and are highly structured treatments. These interventions often include contingency management, enlistment of family support, and utilization of skills training designed to teach adolescents to effectively manage drug relapse, and recognize and avoid antecedents to drug use. There is great variability in the researched treatment programs, and with regard to the family-based approaches, the readers can seek detailed information on specific treatment approaches at the NREPP website or through the respective treatment manuals and articles cited in the Waldron and Turner review. Waldron and Turner indicated that group cognitive-behavioral interventions are well-established, and in fact, appear to be as effective as

the family-based treatments in reducing adolescent substance abuse and related problem behaviors. Other promising therapies include Seven Challenges, Strength Oriented Family Therapy (SOFT), and the 12-Step Minnesota Model. Thus, these treatment approaches may be appropriate targets for future research investigations.

There appears to be a number of noteworthy treatment approaches that can produce positive outcomes for adolescent substance abuse, as indicated earlier. Further, research is being carried out investigating additional treatment approaches and improvements on existing approaches. In particular, existing treatments are seeking to improve effectiveness, as rates of relapse are relatively high. Indeed, although active interventions consistently demonstrate improved outcomes in clinical trials, these state-of-the-art treatments generally produce only average effects. Thus, there is always room for improvement. Along a slightly different vein, very few outcome studies have been conducted with adolescent substance abusers who are formally diagnosed with co-occurring disorders, and co-occurrence tends to generate worse outcomes (see Bender et al., 2006). Therefore, specialized treatment approaches or modifications of the existing approaches may be necessary, with some currently under investigation.

Dissemination of evidence-based treatment approaches for adolescent substance abuse plagues the services field, as it does for the general mental-health services field. The NIDA, SAMHSA, and other groups targeted the translation of research findings into clinical practice as a priority. Services research regarding cost evaluations, organizational readiness, and therapist training has greatly advanced the knowledge for bridging the "science to service" gap, but barriers continue to arise. Based on the findings of successful treatment approaches till date, individuals preparing for a career in treating adolescent substance abusers would be fairly secure in considering the apparent commonalities among research-based treatments. That is, preparation in actively engaging families and adolescents in treatment, family systems, and ecological conceptualization and treatment planning, family therapy techniques from the structural and strategic family therapy approaches, and behavior modification and cognitive-behavioral interventions would provide an optimal background for those pursuing careers in evidence-based treatment models for adolescent substance abuse.

11.6   Mechanisms of Change Underlying the Intervention

Similar to other treatment areas, little research has been conducted regarding the mechanisms of action for treatments of adolescent substance abuse. In fact, a review by Waldron and Turner (2008) reports that: "No studies published to date have been able to provide clear links between mediators of change and outcome for adolescent substance abuse treatment" (p. 254). Further, these authors point out that there could be a single pathway through which change occurs or multiple paths within or between treatment approaches. However, there are numerous questions of interest yet to be answered. A related literature can be found in the process research for specific family therapies for delinquent youth (i.e., MST, FFT, Multidimensional Treatment Foster Care), but only a few studies have been conducted and these findings for delinquent youth may or may not be generalized to adolescent substance abusers. There exists preliminary support to suggest that adolescents formally diagnosed with both conduct and substance abuse disorders are responsive to FBT (Azrin et al., 2001).

Thus, discussion on the mechanisms of change underlying interventions, is based on hypothesized relationships. That is, the evidence-based treatments discussed previously were

developed, for the most part, upon developmental research findings. Developmental research during the past few decades has improved our understanding of the correlates and causes of adolescent behavior problems, which has directed treatment developers to target the variables and risk factors that appear to be linked to adolescent substance abuse. For instance, peer influence is a known risk factor for adolescent substance abuse. Based on the developmental research conducted to date, this influence can occur through paths, such as peer attitudes, beliefs, norms, attachment, access to drugs, modeling, and status. As peer substance abuse consistently has been identified as one of the strongest predictors of adolescent substance use, improving things such as drug refusal skills and parental supervision seems logical as a mechanism for sustaining adolescents' abstinence from substance use, and is, in fact, a component of most CBT programs for adolescent substance abuse.

Likewise, direct effects on adolescent substance use have been found for family management characteristics. Such characteristics include supervision, discipline strategies, consistency in parenting, parental support, and parent–child relationship quality. Therefore, many treatment approaches target these variables as they are hypothesized to be mechanisms of change for reducing adolescent substance abuse. Developmental research also provides evidence for a relatively complex, multidetermined conceptualization of adolescent substance abuse. Thus, family systems and ecological models for treatment utilize the background literature in hypothesizing with regard to the mechanisms of change for their approach to deal with adolescent substance abuse. However, most of these models utilize a family-based approach to engage the family in changing the ecology, given the expense and difficulty in implementing a community-wide intervention.

As may be obvious, cognitive-behavioral models of treatment hypothesize that altering the adolescent's cognitions generates change in substance-use behavior. Improvement in coping skills and cognitive distortions is the goal of such treatments, based on the assumption that these are the primary mechanisms for changing adolescent substance abuse. Further, these models would lend themselves to hypotheses regarding alterations in cognitions that might subsequently cause adolescents to change their own ecology. For example, youth might decide to alter their peer affiliations based on the cognitive-behavioral interventions applied. Thus, even though the initial mechanism of change may be the altered cognitions, the pathway to reducing substance use could include altering the ecological variables and risk factors.

An important but often overlooked mechanism of change may be more foundational in nature. Engagement is a notable factor for all mental-health treatments, regardless of the approach or even the presenting problem. For adolescent substance-abuse treatment, the research shows that failure to engage is common and may have a direct link to treatment outcomes. In national studies, half of all the adolescents dropped out prematurely from treatment for substance-use problems (Office of Applied Studies, 2002), and those who drop out have worse outcomes than those who complete treatment (e.g., Stark, 1992). Thus, engagement is hypothesized to be a mechanism for change and, as described previously, is a focus for many of the evidence-based approaches to adolescent substance-abuse treatment.

11.7 Basic Competencies of the Clinician

Skills sets, with which clinical competency is evaluated, vary widely in substance-abuse settings. Nevertheless, competence is generally considered adequate when providers are able to implement substance-abuse services that are beneficial to patient care. Of course, the extent of

competency in mental-health professionals dynamically changes across client characteristics and experience (Hogue et al., 2008). In this way, a therapist's desire to actively seek out and learn a variety of evidence-based models and theories relevant to addiction is a chief therapeutic competency when treating adolescents who evidence substance disorders. As indicated in the American Psychological Association's *Ethical Principles of Psychologists and Code of Conduct* (American Psychological Association, 2002), psychologists are expected to learn and successfully implement evidence-based practices, which are becoming increasingly available through various training programs and government-sponsored initiatives. Indeed, support of government officials in utilizing evidence-based practices in adolescent substance abuse has shifted the field to improve service delivery in community settings.

As indicated earlier in this paper, research indicates that there are now many evidence-based treatments available. However, no active treatment for drug abuse has clearly outperformed any other active treatment (see Waldron & Turner, 2008). Moreover, there is accumulating evidence that effective utilization of specific and non-specific therapeutic factors improves the treatment outcome. Non-specific factors are often considered skills that are relevant to establishing positive therapeutic relationships (e.g., being genuine, empathy), whereas specific factors are relevant to explicit procedures involved in the implementation of prescribed treatments (i.e., maintaining treatment integrity). Contemporary therapists are challenged to adopt evidence-based treatments while developing their clinical competencies. As might be expected, with experience and effective training in evidence-based methodologies, mental-health professionals are likely to transition from basic to expert competencies. In the remaining sections, we review some of the major processes underlying basic and expert competencies as relevant to the administration of evidence-supported programming for adolescent substance abuse.

11.7.1 Basic Competencies

As underscored in SAMHSA's Technical Assistance Publication Series 21 (TAP 21; www.nattc.org), having a basic understanding of the addictions is essential to treatment service delivery. Thus, it is important that service providers seek out evidence-supported training opportunities in addictions, and learn methods of accessing addiction-related materials from reputable organizations, such as the National Institutes of Health (NIH) and SAMHSA. Prior to clinical training, therapists should establish a foundation of basic knowledge in the addictions, such as prevalence rates for substance abuse within the general adolescent population, substance withdrawal and overdose symptoms that frequently occur across major drug classes, and the primary pharmacological effects of psychoactive substances. Evidencing knowledge of various etiological influences that are responsible for the development of substance disorders, as well as major theories that act to maintain substance disorders (e.g., operant and associative learning, systems theory) are also basic competencies. This information permits service providers to implement treatment planning that is well-conceptualized, and therefore, likely to target key problem areas in these adolescents.

Basic competency must be demonstrated upon the youth and primary caregiver's first contact with the substance abuse clinic, which is usually during an initial telephone call. As Lefforge, Donohue, and Strada (2007) indicated in their extensive review of the intervention outcome studies relevant to therapeutic session attendance, it is important to discuss treatment

prior to scheduling outpatient and home-based therapeutic sessions in substance-abuse populations that are known to evidence poor session attendance rates. The concept of "teletherapy" or nonoffice-based engagement meetings with clients and their significant others is unfamiliar to many substance service providers. Nevertheless, therapists need to know the research literature regarding these pre-intervention strategies indicates that they are clearly effective in the improvement of therapy-session attendance and retention.

During initial contacts, it is important to listen to the concerns of both the youth and youth's parents, empathize with expressed concerns, and provide an orientation of the program (e.g., potential services offered, solicitation of obstacles that may interfere with session attendance, generation of solutions to solicited problems). When praising commitments to enter treatment, the provider needs to appear confident, sincere, and supportive. However, unconventional telephone calls performed a few days prior to on-going treatment sessions also appear to assist in managing problems that may occur between the sessions (e.g., completion of therapy assignments, arguments) and improve treatment retention.

High ratings of rapport have been associated with greater retention and lower levels of drug use and criminality, after treatment termination (Joe, Simpson, Dansereau, & Rowan-Szal, 2001). Therefore, it is very important that substance-abuse service providers utilize clinical skills that have been found to be associated with the establishment of rapport, such as being objective, empathic, and praiseworthy (Bohart & Greenberg, 1997). An objective style focused on maintaining neutrality when conducting therapy sessions is important because youth who have abused illicit drugs and alcohol are often critiqued, and usually find it reinforcing when others listen to their concerns unconditionally and later express concern for their welfare. Other important basic competencies relevant to interviewing style include utilization of open-ended questions, reflective statements, affirmations, and pointing out discrepancies in a supportive and reassuring manner.

Competent substance-abuse providers value the importance of prompting family members to be reinforcing, rather than permitting them to dwell on undesired behaviors. They are able to be enthusiastic, and instill hope when reviewing the treatment plan, presenting therapeutic options and collaboratively guiding the family in appropriate decision-making.

Other basic competencies are relevant to understanding which psychometrically-validated instruments are available for use in the identification and assessment of substance use and its associated problems. This includes understanding how to evaluate the utility and psychometric merit of these methods, determining the measures that are most appropriate in various settings, and how best to implement the assessment batteries to measure the treatment outcome. Knowledge of the fundamental areas of assessment cannot be underestimated. These include, but are not limited to, a thorough assessment of substance use, social skills, family functioning, psychopathology, medical and medication concerns, previous treatments, stimuli that facilitate and inhibit substance use, and spirituality. The provider must be adequately trained to summarize and interpret the results to assist in determining an effective treatment plan.

There are various safety issues that must be assessed and effectively managed, if present. These include child maltreatment, substance overdose, suicidal ideation, and home hazards. Indeed, safety management is a primary basic competency, including a sincere understanding of the seriousness of both immediate and long-term consequences of violence. The substance abuse provider with basic competence is aware of generic safety plans that may be customized to address idiosyncratic concerns. These include flowcharts guiding implementation of safety skills, and generic lists of appropriate resources to assist in expeditiously making appropriate

referrals to shelters, family service agencies, or legal counsel when indicated. When conducting home-based interventions, it is important for the competent therapists to tour the home for hazards, and assist families in the prevention of accidental injury and assault.

Along a different vein, substance-abuse providers must be familiar with factors that place adolescents at risk to abuse substances, and similarly, understand how various factors act to buffer against substance abuse. Indeed, such knowledge is more important in establishing an effective treatment plan than being aware of the severity of substance use (Latimer, Newcomb, Winters, & Stinchfield, 2000), probably because this information may be utilized to develop accurate case conceptualization and treatment planning.

Substance-abuse providers with basic competency are able to create goals for therapy that are desired by the youth, caregiver, and referral agent (e.g., judge, probation officer), although they may have difficulty integrating these goals to address common desires. Developed goals include treatment target dates in which the behaviors are to be accomplished, and the rewards that will be associated with goal accomplishment. Providers with basic competence understand that it is necessary to include at least one goal that is relevant to the prevention of substance use, either directly targeting the abstinence or lowering the frequency of days used, or indirectly targeting stimuli that are incompatible with substance use (e.g., coming home on time for curfew, attending school).

Knowledge of evidence-based substance-abuse treatment options, including methods of evaluating the appropriateness of intervention models, has historically not occurred in community treatment settings. However, this has significantly changed in recent years. Today, for instance, various "best practice" treatment models for use in adolescent substance abuse are being sought after by administrators of community substance-abuse programs. Some of these treatments are more empirically established than others. Therefore, it is especially important that treatment providers understand the basic research methodologies, so that they can effectively examine the treatment outcome studies to assist in determining those interventions that are most appropriate. In addition, with regard to basic competencies, professionals need to understand how to ensure that the treatment is working, which may be difficult because adolescents who abuse illicit drugs and alcohol are often unmotivated to indicate when they fail to accomplish their treatment goals.

Competent service providers are able to manage behavior problems that co-exist with substance disorders. At the basic level of competency, service providers should at least be vaguely familiar with the Diagnostic and Statistical Manual for Mental Health Disorders IV-TR (American Psychiatric Association, 1994) to assist them in identifying mental-health symptoms that trigger substance use (e.g., depressive thoughts in Dysthymia, anxiety at a party in Social Phobia, guilt consequent to purging food in Bulimia Nervosa, fist fight in Conduct Disorder). With regard to protection of patients, mental-health professionals should be cognizant of co-morbid mental-health disorders, and appreciate medical disorders that may influence, or be influenced by, addictive disorders. The substance-abuse provider is ethically responsible for researching theoretical models involved in the inter-disciplinary provision of care. This permits them to make appropriate referrals expeditiously, when indicated. Medical professionals should be especially considered in the treatment of addictions, as they may prescribe drugs that lower relapse potential. For instance, anti-depressant medications may lower depressed thoughts that often act to trigger drug use. Although evidence-based treatments for substance abuse are beginning to demonstrate efficacy with comorbid behavioral disorders, professionals must be competent in realizing their professional limitations.

Adolescent substance-abuse service providers are expected to appreciate and show interest in clients of diverse backgrounds (see Strada, Donohue, & Lefforge, 2006). Similarly, treatment providers need to be familiar with adolescent development and differences in application of treatment between adults and adolescents. For instance, CBTs for drug abuse emphasize greater contingency management and family support in adolescents than in adults. Furthermore, an understanding of the legal and ethical differences that differentially affect these age groups is also a basic competency. Youth, for instance, require parental consent for treatment in most situations, and if the service provider feels it is appropriate to do so, parents may legally obtain information about the substance-abuse treatment of their children without their consent.

When working with youth who are severely dependent on substances, cravings may influence relapse. Therefore, it is essential that service providers with a basic level of competence are familiar with commonly encountered antecedent stimuli in the environment that are likely to bring about cravings for substance intoxication. Providers also need to be adept in helping patients manage these cues before the cravings intensify to bring about substance use.

Competent substance-abuse providers should be familiar with the consequences of adolescent substance abuse and abstinence. Negative consequences associated with substance abuse include family anguish, lack of interest in school, withdrawal of support from significant others, physical and psychological harm, and poor relationships with others. However, service providers at the basic level of competence are also familiar with various positive consequences of substance use, including feelings of euphoria, acceptance of peers, and elimination of anxious feelings and aversive thoughts. Being aware of such consequences may help the substance-abuse providers understand the factors that act to motivate youth to attempt abstinence from substances.

Traditionally, community-based substance-abuse treatment programs have excluded family members from participation in the therapy. However, studies have indicated significant benefits when family members are involved in the treatment plan. Indeed, as indicated earlier, family-based treatment for adolescent substance abuse is at least as effective as group and individually-based behavioral therapies. Thus, it is important that substance-abuse providers understand how the family members may influence both substance abuse and abstinence.

11.8 Expert Competencies of the Clinician

Substance-abuse providers who have reached expert status evidence all of the aforementioned basic competencies. However, they are also capable of demonstrating adherence to prescribed protocols while effectively incorporating their own style and adjunctive intervention modalities. Indeed, experts are able to demonstrate innovative applications, as they not only seek out evidence-supported treatments, but integrate these methods to address problems that have been insufficiently addressed in the research literature. Experts are able to identify prevalence rates of substance abuse and dependence in particular demographic groups, and understand why the prevalence rate differs among these sub-groups. With regard to patient safety, experts are able to both recognize and effectively manage substance withdrawal and overdose symptoms. They are familiar with the pharmacological effects of psychoactive substances, as well as their effective management. In addition to being familiar with

etiological influences responsible for the development of substance disorders, experts are intimately familiar with the contextual factors that maintain and inhibit substance disorders (e.g., economic and cultural environment). Along these lines, they can develop and modify treatment planning spontaneously based on the needs of the clientele and their responsiveness to treatment.

Experts are particularly good at recognizing non-verbal and indirect signals that indicate that the patients are insufficiently engaged in therapy (e.g., avoidance of eye contact, repeated attempts to refute therapist directives, smirks, stating, "I guess…"), and upon first indication of these signals, are able to motivate individuals to do well in therapy. Experts are also able to assess the influences that underlie poor therapy-session attendance, and quickly implement strategies that are likely to encourage future participation. For instance, an expert might very neutrally ask a caregiver to indicate potential "cons" about the therapy, empathize with expressed concerns, and solicit solutions to poor session attendance. Experts are also adept at non-aversively challenging patients to discontinue noncompliant therapeutic behaviors, and can easily identify, encourage, and implement consequences that increase participation in therapy. For instance, a treatment provider with basic competence might recognize the importance of letting a noncompliant youth know that there are negative judicial consequences for missing therapy sessions. However, an expert might first let this adolescent know that he or she has done well in the therapy, and subsequently disclose the consequence of missed attendance in an empathic manner (i.e., "I think it would be terrible if your children were removed from your home because you weren't able to attend your sessions with me. What can I do to help you make your sessions?"). In the aforementioned example, the therapist with basic competence is likely to increase therapy attendance, but perhaps, at the risk of decreasing rapport, whereas the expert provides the same message, but as an advocate to the adolescent.

As indicated previously, basic competencies is indicated when service providers are objective, empathic, and praiseworthy. However, non-experts, when compared with experts, may get flustered in certain therapeutic situations, leading them to evidence difficulties maintaining these skills. Indeed, adolescents may rudely and repeatedly talk to others during group sessions, yell at their parents during family sessions, or refuse to initiate behavioral rehearsal exercises. Experts are able to recognize the antecedent stimuli leading to these problem behaviors early in the response chain, and soon after calmly and confidently reinforce successive approximations towards the desired behavior. For instance, while basic competence would be demonstrated if a treatment provider was able to immediately separate an arguing parent and youth to prevent further escalation and potential for violence, an expert might terminate the argument by waving hands as a distraction technique, blame underpinnings of the argument on some external factor, and utilize the problem situation as an opportunity to instruct both parties to practice anger management and communication skills training in vivo (see Azrin et al., 2001). Throughout this experience, expert competence would be demonstrated if the service provider was able to model calm and empathic behavior.

While basic competence is noted when service providers are able to administer screening and assessment tools for adolescent substance abuse according to standardized methods, experts are able to administer these tools more quickly and with greater accuracy owing to years of practice. They are also knowledgeable about the methods of influencing youth and their significant others to respond accurately to these measures. For instance, they provide rationales prior to administering each measure that indicate how exactly the results will inform treatment planning, what the measure is intended to assess, the limits of confidentiality,

high likelihood of having to re-administer inaccurate tests, and that validity measures are being administered to assist in demonstrating their candid responses. Experts may also be aware of the signals that indicate that responses are inaccurate or deceptive, and are able to take immediate steps to correct these problems to protect the validity of testing. For instance, answer-key patterns resembling conspicuous shapes or peculiar designs reflecting a lack of effort (e.g., filled in bubbles resemble a Christmas tree), urine samples as clear as water, all endorsed items reflecting denial of problem behavior, or excessively quick responses.

Experts are proficient at parsimoniously selecting relevant psychometrically-validated assessment measures based on responses to their clinical interview and screening instruments. Indeed, given the limitations of administration time, they are able to effectively determine when to solicit additional information during standardized test administrations, and when it is important to maintain strict adherence to pre-determined assessment protocols.

Most substance-abuse treatment providers evidencing basic competencies are capable of recognizing environmental ecosystems and stimuli that make substance use more and less likely to occur. They are capable of conceptualizing how these factors act to maintain substance-abusive patterns of behavior for their clients in a manner that they can appreciate. Moreover, they motivate adolescents to critically examine the importance of eliminating risk factors, and to discover people and events with whom they can associate with to enhance their quality of life, while decreasing substance use.

Expert providers are able to create goals for therapy that integrate what is specifically desired by the youth, caregiver, and referral agent (e.g., judge, probation officer). Along these lines, they are able to diplomatically determine the mutually agreed upon target behaviors and incentives, and effectively negotiate the target dates in which mutual satisfaction will occur in the event of accomplishment of goals within these time periods. When legal goals appear to be unreasonable, expert providers establish meetings to express apparent concerns and attempt to persuasively generate alternative goals that are likely to build enthusiasm and self-efficacy in adolescent clients. However, experts are also able to recognize when adolescents need to set more ambitious goals, and similarly, when significant others need to provide more encouragement for the completion of effective goal setting. When these situations occur, experts confidently motivate family members to realize their potential. If motivation is low, experts are able to effectively utilize motivational techniques to raise awareness of problem behavior and incite desire for goal accomplishment. This may be done by soliciting unpleasant consequences associated with substance abuse, and empathizing with these concerns. Another expert-laden strategy involves soliciting both unpleasant and pleasant consequences, and pointing out discrepancies to motivate goal-oriented behavior. For instance, an expert therapist might state, "You indicated that you hate it when your mother always nags you when you're high, but find drug use helps you relax. Help me to understand how this is relaxing to you?" Another motivational technique involves breaking difficult-to-accomplish goals into easier-to-accomplish sub-goals that are more achievable, and bring about immediate reinforcement.

Although experts are aware of the major processes underlying various evidence-based treatment options, they are intimately familiar with at least one evidence-based intervention approach for substance abuse, and capable of training and supervising others in the administration of this treatment. When problem behaviors appear in therapy that co-exist with substance disorders, experts are familiar with evidence-based substance-abuse treatment programs that have shown improved outcomes with these co-existing problem behaviors.

They are prepared to implement multiple intervention approaches in complicated cases, and be flexible to adjust the treatment to accommodate various motivational levels of patients (which frequently change for better or worse). Experts understand that evidence-based treatments often do not exist for some problem behaviors, but are prepared to integrate ancillary treatments that have demonstrated outcomes with similar problem behaviors. Experts appear to know when it is most important to implement non-prescribed interventions. Along these lines, some studies indicate enhanced treatment outcomes when therapists demonstrate a high degree of competence and moderate degree of adherence to substance-abuse treatments (Barber et al., 2006). For instance, if an adolescent client was diagnosed with Trichotillomania, an evidenced-supported therapy specific to this disorder (e.g., Habit Reversal; Azrin & Nunn, 1973) would be utilized to complement the respective substance-abuse therapy. Along a different vein, experts are able to manage crises that interfere with treatment planning. Sources of potential crises include extenuating life stressors (e.g., running away from home, being expelled from school, being arrested) that interfere with the development of daily living. However, experts appreciate their limitations, and make appropriate referrals when they are unfamiliar in the treatment of co-morbid problems or crises. After making referrals, experts regularly inquire about how their clients are progressing with the referral agent's treatment plan. They encourage their clients to actively participate in ancillary programs, and diplomatically indicate alternative courses of treatment when they feel these treatments are inappropriate or ineffective.

11.9   Transition from Basic to Expert Competence

Transition from basic to expert clinical competence in substance abuse is a continuous and sometimes unpredictable learning process shaped by both professional and non-professional experiences. Professional training is directly relevant to clinical competence (Kaslow, 2004), whereas non-professional "life experiences" are also likely to have an impact on the rate and extent of the development of clinical competence. For instance, particular therapeutic skill sets, enthusiasm and skill level of the trainer, motivation of the participants, and intelligence, among many other factors, all act to shape receptivity to training, which in turn influences the development of clinical competence in various contexts. Further complicating the transition from basic to expert competence are experiential circumstances, such as those mentioned earlier, which interact with one another. Thus, an unenthusiastic trainer may be perceived by his trainees to be uninterested in the respective training workshop, resulting in the trainees being non-responsive to the trainer's requests, which in turn leads the trainer to be increasingly reserved. Of course, some life experiences are not good for substance-abuse treatment, whereas others may lead to greater acquisition and skill. Along these lines, non-directive therapies have been found to be relatively ineffective in adolescent substance abuse when compared with other treatments (e.g., Azrin et al., 2001). Therefore, persons who espouse these therapy approaches for substance abuse may evidence difficulties adjusting their therapeutic style to evidence-based treatments.

Of course, clinical supervisors and trainers are unlikely to control life experiences of attendees. However, they are capable of adjusting their own behavior to increase the likelihood of trainees to get motivated to learn the various clinical tasks that are the focus of the training. For instance, they can be enthusiastic about the intervention approach, conduct

behavioral role-playing, emphasize flexibility, and frequently solicit feedback (Fraser & Greenhalgh, 2001). Similarly, supervisors should be knowledgeable about State and Federal laws governing administration of the therapy, incorporate a supervision model that utilizes evidence-based strategies (e.g., structured case presentations, modeling, behavioral rehearsal, assigned readings), and encourage evaluation of the treatment's integrity. Although focused on treatment integrity, supervisors will likely increase receptivity to protocol adherence if they encourage participants to develop their own personal style when doing so. For instance, in our own method of improving protocol adherence (e.g., Azrin et al., 2001; Sheidow, Donohue, Hill, Henggeler, & Ford, 2008), therapists are encouraged to choose to implement substance-abuse therapies from a list of behavioral therapy options. Each therapy is guided by a protocol checklist of various therapeutic steps to be performed by the therapist. The therapist must implement the therapeutic behaviors that are indicated in the respective checklist to achieve adherence. However, the therapist is free to initiate whatever ancillary treatments or actions are desired without negatively affecting adherence to the prescribed treatment model. Although this method of assessing treatment is only recently developing psychometric support (see Sheidow et al., 2008), it is quite promising as it effectively integrates enhanced therapeutic flexibility within a standardized behavior therapy model. There are great benefits to conducting standardized training initiatives to support the transition from basic to expert competencies (Belar, 1992). For instance, standardized materials (e.g., manuals, protocol checklists summarizing the information in manuals) may be cost-effectively produced, role-play scenarios and other components of training can be systematically enhanced based on experiences over time, and treatment implementation can be easily monitored and adjusted. Recently, research has commenced to determine the relationship between treatment adherence and competence. Indeed, the few studies that have addressed this relationship have yielded mixed results (see Hogue et al., 2008). Similarly, the evaluation of supervision and training strategies in adolescent substance abuse is also in its infancy, although relatively more advanced than the association between competence and adherence. Future studies must be conducted to determine viable training strategies that balance treatment integrity with enhanced therapist flexibility in the transition from basic to expert competencies within community settings.

11.10 Summary

A basic overview of basic and expert competencies involved in the treatment of adolescent substance abuse and dependence was provided, including relevant background information about the primary substance disorders (i.e., abuse and dependence). Furthermore, diagnostic features, prevalence rates, developmental course, and risk factors were highlighted to provide a context in which to examine professional clinical competencies. In addition, methods of recognizing substance abuse and factors that act to increase its likelihood were also emphasized. Family and behavior therapies appear to demonstrate greatest relative efficacy in the treatment outcome literature, and some of the common characteristics of these interventions were presented. Lastly, the transition from basic to expert competencies appears to be an unpredictable and often difficult process to measure. Some of the complications that act to facilitate and impede clinical competency were presented. Advancements in training technology may be useful in making this process more efficient.

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12 Child Sexual Abuse

Elaine K. Martin · Christopher Campbell · David J. Hansen

Abstract: Child sexual abuse (CSA) is a pervasive problem that significantly impacts many youth and their families. CSA has been associated with a variety of internalizing and externalizing problems for sexually abused youth. However, the effects of CSA are rarely limited to victims, and nonoffending caregivers and siblings often experience distress following the disclosure of abuse. Due to the heterogeneous symptom presentation exhibited by victims of CSA, and the potential impact of CSA on the entire family, it is important for clinicians to use assessment strategies that are multi-method, multi-symptom, and multi-informant. Similarly, treatment planning for sexually abused youth is complicated by the diverse impact of CSA on families, and psychosocial interventions often include victims of CSA as well as nonoffending family members. While several psychosocial interventions exist for CSA, most have not been rigorously examined. However, CSA treatments typically include similar mechanisms for change, such as psychoeducation, anxiety management, exposure, cognitive coping, behavior management, and social support. Due to the complex nature and potential long-term consequences of CSA, it is important for clinicians who work with sexually abused youth to understand and demonstrate mastery levels of clinical competencies in this area. This chapter examines CSA-related clinical issues and describes competencies for addressing the heterogeneous impact of CSA on youth at both the basic and expert level. Competencies discussed include using an evidence-based approach, possessing scientific knowledge of CSA and treatments, case conceptualization skills, building rapport and the therapeutic alliance, treatment planning and monitoring, understanding client characteristics, monitoring legal and ethical issues, evaluating risk for harm to self and others, working with interdisciplinary teams, and understanding the effects of medication on treatment. Methods of mastering these competencies through education, training, experience, supervision, and self-assessment are discussed.

12.1 Overview

Child sexual abuse (CSA) is a serious problem that impacts the lives of many youth and their families. Although CSA is sometimes described differently across clinical, legal, and research contexts, it is commonly defined as sexual acts between a youth and an older person (e.g., 5 or more years older) in which the dominance of the older person is used to exploit or coerce the youth for sexual stimulation. Despite the lack of consensus on the definition of CSA, most professionals agree that abusive behaviors may include *contact offenses*, such as genital touching, oral sex, and digital, object, or penile penetration (vaginal or anal), as well as *noncontact offenses* (e.g., genital exposure, voyeurism, exposure to pornographic material, having a child undress or masturbate, etc.).

Sexual acts between individuals with age differences of 5 or more years are generally seen as abusive because younger children are not considered capable of consenting to sexual activities with older persons. In clinical and research contexts, CSA is sometimes used to describe youth

who were victimized by similar age peers, though in legal contexts these may be viewed as "assault." Similarly, perpetration by an adult stranger or nonfamily member may be considered sexual abuse in clinical contexts, but within the legal system it may be treated as sexual assault.

Challenges in defining CSA contribute to the difficulty in identifying its incidence and prevalence. Child protective services (CPS) records indicate that approximately 1.1 children per 1,000 experience sexual abuse in the USA each year (US DHHS, 2008). Research utilizing retrospective reports indicates that as many as 20% of women and 5–10% of men experienced sexual abuse as a youth (Finkelhor, 1994; Wolfe, 2006). However, it should be noted that the number of CSA cases substantiated by CPS dropped by approximately 40% during the 1990s (Finkelhor & Jones, 2004; US DHHS). While some of this decrease may reflect a real decline in incidence, it is likely due to a combination of factors, including increasing conservatism on what is substantiated as abuse, exclusion of cases that do not involve caretakers, changes in data collection methods, and less reporting due to concerns about backlash from families (Finkelhor & Jones).

All 50 states have laws requiring specific individuals to report cases of suspected child abuse and neglect. These statutes take precedence over professional confidentiality requirements, and commonly include physicians, nurses, psychologists, social workers, teachers, day care workers, and law enforcement personnel. In fact, many state laws require "all persons" to report suspicions of maltreatment, though many people are unlikely to be aware of the mandate. Statutes provide immunity from criminal and civil liabilities when reports are made in good faith and without malice, whereas failure to report suspicions can lead to criminal or civil penalties, as well as malpractice and licensure problems. Unfortunately, research has consistently shown that despite these reporting requirements, many cases of abuse go unreported, even by professionals; this can be due to the failure to recognize that the situation may be abusive or because they choose not to report (Kalichman, 1999).

CSA may come to the attention of caregivers, authorities, or others via child self-disclosure, medical or physical evidence (e.g., sexually transmitted disease), changes in behavior that prompt concern and inquiry, and investigations with other abused youth. Generally, there are no physical indications of CSA at the time of evaluation; however, when present, medical findings are extremely valuable for substantiation. After initial identification that CSA may have occurred, forensic interviews are often conducted to carefully document the abuse, make decisions about protecting the children, and prosecute perpetrators (Cronch, Viljoen, & Hansen, 2006). Once the occurrence of CSA has been determined, a detailed clinical assessment of abuse-related symptomatology can begin.

Over the past 4 decades, a growing body of empirical literature has linked childhood sexual abuse to a myriad of short- and long-term psychological problems, including internalizing (e.g., anxiety, depression, etc.) and externalizing (e.g., substance abuse, sexual behavior, etc.) problems (Beitchman, Zucker, Hood, DaCosta, & Akman, 1991; Kendall-Tackett, Williams, & Finkelhor, 1993; Tyler, 2002). Although posttraumatic stress symptomatology is the most common clinical syndrome (Kendall-Tackett et al., 1993), sexually abused children are a heterogeneous group, and victimization does not necessarily have an inevitable pattern or a unified presentation of symptoms (Saywitz, Mannarino, Berliner, & Cohen, 2000). In fact, some individuals exhibit little to no symptoms following the abuse (Kendall-Tackett et al.; Wolfe, 2006). While the research on CSA symptomatology is extensive, it is largely correlational and without experimental control. Thus, findings are challenged

by the presence of many potential confounding variables, such as the co-occurrence of other forms of maltreatment, domestic violence and marital dysfunction, and poverty (Hecht & Hansen, 2001).

Understandably, effects of CSA are rarely limited to the victim, and often impact the entire family, including nonoffending caregivers and siblings. For example, caregivers may experience a variety of stressors associated with the disclosure of abuse such as partner separation/divorce, moving, financial loss, and participation in criminal and/or civil legal litigations (Corcoran, 2004). These stressors are often accompanied by psychological distress including anger, depression, guilt, embarrassment, grief, and secondary trauma (Deblinger, Hathaway, Lipmann, & Steer, 1993; Manion et al., 1996). Siblings may also struggle with problems such as confusion, fear, shame, helplessness, guilt, anger, and resentment toward the victim (Baker, Tanis, & Rice, 2001; Swenson & Hanson, 1998). Given these difficulties, varied interventions may be necessary not only for the victims of CSA, but also for their nonoffending family members.

This chapter examines clinical issues and competencies for addressing the heterogeneous impact of CSA on youth. Although the primary focus will be on child victims, this chapter also addresses issues associated with the impact on their parents and siblings, to increase the chances of successful treatment of CSA youth and their families.

12.2 Recognition of Symptoms and Their Assessment

12.2.1 Symptomatology to Assess

As stated above, victimization does not have a fixed pattern or a unified presentation for youth. Rather, sexually abused youth display various patterns of behavioral and emotional symptoms at different levels of severity. CSA has been linked to a variety of internalizing problems, including anxiety, depression, poor self-esteem, sleep disturbances, and somatic complaints (Beitchman et al., 1991; Kendall-Tackett et al., 1993; Paolucci, Genuis, & Violato, 2001; Tyler, 2002). Posttraumatic stress disorder (PTSD) is the most commonly identified clinical syndrome; research indicates that more than 50% of the CSA youth meet full or partial criteria for PTSD (Saywitz et al., 2000).

Research has also linked CSA to a variety of externalizing problems, including conduct problems and delinquency, substance abuse, poor academic performance, interpersonal relationship difficulties, and self-injurious and suicidal behaviors (Beitchman et al., 1991; Kendall-Tackett et al., 1993; Paolucci et al., 2001; Tyler, 2002). In addition, some youth may exhibit increased interest with sex and genital areas, as well as heightened sexual activity in the form of increased masturbation, compulsive sexual play, and/or inappropriate sexual behavior toward peers and adults (Kendall-Tackett et al.).

While some CSA victims display a variety of symptoms, other individuals – as many as 21–49% of sexually abused children – exhibit little to no symptoms following the abuse (Hecht & Hansen, 1999; Kendall-Tackett et al., 1993; Sawyer & Hansen, 2009). Many of these youth may remain symptom-free across their lifespan, but there is some evidence for a "sleeper effect," in which symptoms manifest months or years later (Finkelhor & Berliner, 1995; Mannarino, Cohen, Smith, & Moore-Motily, 1991). Research suggests that as many as 10–20% of asymptomatic children may experience increased symptomatology over a 12–18-month

period following disclosure (Finkelhor & Berliner; Mannarino et al., 1991) or experience symptoms during critical periods of life such as puberty, entry into sexual relationships, and child bearing (Olafson & Boat, 2000). It is important to note that the high number of asymptomatic youth may also be explained, at least in part, by methodological issues, such as the possibility that measures utilized in CSA research do not assess the entirety of symptoms or lack the sensitivity to capture symptoms experienced by these youth.

Heterogeneity of consequences is not surprising, given the varied nature and extent of sexual abuse and the contexts in which it occurs. Research indicates that the impact may be more severe when abuse occurs over a longer duration, with greater frequency, involves force or violence, more serious sexual acts are committed, and the perpetrator has a closer relationship to the victim (e.g., father or father figure; Kendall-Tackett et al., 1993; Tyler, 2002). However, results remain inconsistent across studies suggesting that other factors (or combinations of factors) may impact outcomes of CSA, including premorbid child characteristics, family functioning (e.g., marital conflict, finances, etc.), environmental stressors, and school and community support (Tyler; Wolfe, 2006). Additional risk factors include poor caregiver support following disclosure, distorted cognitions, negative attributional style (by the victim or parents), problematic coping strategies, and additional forms of maltreatment (Mannarino & Cohen, 1996).

As previously noted, disclosure of childhood sexual abuse is a disruptive experience that often impacts the entire family, including nonoffending caregivers, siblings, or even extended family members. Caregivers are expected to support their children as they attempt to cope with the abuse and related consequences, but caregivers also experience substantial emotional distress, conflict, and trauma after their child's disclosure, and may be viewed as secondary victims (Deblinger et al., 1993; Elliott & Carnes, 2001; Lewin & Bergin, 2001; Olafson & Boat, 2000). Nonoffending caregivers may experience heightened levels of depression, anxiety, and diminished maternal attachment behaviors (e.g., sensitivity, cooperation, acceptance, and accessibility during interactions with their children; Lewin & Bergin), as well as symptoms of PTSD (Davies, 1995). Further, empirical literature suggests that, although an abuse history for mothers is not associated with diminished support (Deblinger et al.), nonoffending mothers with a history of CSA experience significantly more PTSD symptoms (Timmons-Mitchell, Chandler-Holtz, & Semple, 1997) and general psychological distress (Hiebert-Murphy, 1998; Timmons-Mitchell et al., 1997) than do mothers without such history.

12.2.2 Assessment of Abuse-Related Symptoms

When a sexual abuse allegation occurs, a forensic assessment may be needed to determine whether the child was abused, collect information for prosecuting the perpetrator, and protect the youth. A detailed description of the forensic assessment process is beyond the scope of this chapter (for additional information, Cronch et al., 2006; Friedrich, 2006; Hubel, Flood, & Hansen, in press). Similarly, a comprehensive list and thorough description of the wide variety of assessment measures used in CSA treatment are also beyond the scope of this chapter (for additional information, see Friedrich; Hansen, Hecht, & Futa, 1998; Swenson & Hanson, 1998). Instead, the following section will provide a brief description of commonly used, empirically supported clinical instruments that assess the social, emotional, and behavioral functioning of the youth and their family following sexual abuse. Across the variety of symptoms areas noted

below, clinical interviews are essential for identifying problems and selecting measures and treatment approaches (Hubel et al., in press). Given the wide array of potential symptomatology linked to sexual abuse, pretreatment assessment should be multi-method, multi-symptom, as well as multi-informant.

Sexual Abuse History. It is imperative for clinicians to have an understanding of the abusive experiences, which is generally ascertained from the caregiver(s) or referral sources. The History of Victimization Form (Wolfe & Gentile, 1992) can be used to obtain detailed information from the child's social worker (or other professionals) so that the youth is not subjected to further investigative questioning. The Parent Impact Questionnaire (Wolfe & Gentile) is a structured interview for obtaining the youth's physical and sexual abuse experiences, as well as historical information such as family problems (e.g., separations or divorce, parental conflict, etc.).

Abuse-Specific Symptoms. A fundamental aspect of the evaluation process is the assessment of symptoms specific to the sexual abuse experience. Two commonly used empirically supported measures for youth between the ages of 8 and 16 are the Children's Impact of Traumatic Events – Revised (CITES-R; Wolfe, Gentile, Michienzi, Sas, & Wolfe, 1991; Chaffin & Schultz, 2001) and the Trauma-Symptom Checklist for Children (TSC-C; Briere, 1996). The 78-item CITES-R measures the impact of sexual abuse from the child's perspective (i.e., thoughts and feelings about what happened to them) across four dimensions: posttraumatic stress (intrusive thoughts, avoidance, hyper-arousal, sexual anxiety), abuse attributions (self-blame/guilt, vulnerability, dangerous world, empowerment), social reactions (negative reactions, social support), and eroticism. The TSC-C is 54-item measure that assesses symptoms related to abuse experiences, but is not limited to only experiences of sexual abuse, making it particularly useful for youth who experienced multiple types of abuse. The TSC-C has scales assessing trauma-specific symptoms of anger, anxiety, depression, posttraumatic stress, dissociation, and sexual concerns. A version for children between the ages of 3 and 12, the Trauma-Symptom Checklist for Young Children, is also available (Briere et al., 2001).

Some sexually abused youth may exhibit inappropriate sexual behaviors. The Child Sexual Behavior Inventory (CSBI; Friedrich et al., 2001) is a 38-item inventory completed by parents (or caregivers) to assess the frequency of various sexual behaviors pertaining to sexual aggression, self-stimulation, gender-role behavior, and personal boundary violations observed in their children from ages 2–12 years. For older youth (ages 12–18 years), the Adolescent Clinical Sexual Behavior Inventory (ACSBI; Friedrich, Lysne, Sim, & Shamos, 2004) is a 45-item self-report measure used to assess sex-related behaviors, including sexual risk taking, nonconforming sexual behaviors, sexual interest, and sexual avoidance/discomfort. A parent report version of the ACSBI is also available, though caregivers may lack sufficient information to accurately report adolescent sexual behavior.

The Weekly Problems Scale-Child Version (WPS-C) and the Weekly Problems Scale-Parent Version (WPS-P) were developed for use as brief repeated measures that assess multiple domains of symptoms during the treatment of CSA youth (Sawyer, Tsao, Hansen, & Flood, 2006). The WPS-C (11 items) and the WPS-P (15 items) assess emotions, behavior, and relationships that occur over the past week. The WPS-C subscales measure negative mood and behaviors, problematic peer and parental interactions, and self-esteem problems. The WPS-P measures problematic behaviors, parenting and family problems, negative mood, and sex and sexual abuse communication issues.

Child Emotional and Behavioral Symptoms. Child self-report measures of internalizing problems are often an essential component for treatment planning and ongoing assessment.

Examples include: (a) the Children's Depression Inventory (CDI; Kovacs, 1992), a 27-item assessment measure of depressive symptomatology across affective, cognitive, and behavioral dimensions; (b) the Multidimensional Anxiety Scale for Children (MASC; March, 1997), a 39-item measure of clinically significant domains of anxiety, including physical symptoms, social anxiety, harm avoidance, and separation/panic; (c) the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1985), a 37-item assessment of general anxiety in children and adolescents; (d) the Children's Fears Related to Victimization (CFRV), a 27-item subscale of the Fear Survey Schedule for Children – Revised (FSSC-R; Ollendick, 1983) used to assess situations sexually abused youth may find distressing (e.g., people not believing me); (e) the Children's Loneliness Questionnaire (CLQ; Asher & Wheeler, 1985), a 24-item questionnaire of children's feelings of loneliness, social adequacy, and subjective estimations of peer status; and (f) the Self-Esteem Inventory (SEI; Coopersmith, 1981), a 58-item measure of children's attitudes about themselves in social, academic, family, and personal areas of experience.

Utilization of multiple informants, such as the child, caregivers, and professionals (e.g., teachers), is a crucial element in all behavioral assessments of children, especially in relation to externalizing problems. Most commonly, broad-spectrum measures are incorporated to assess a variety of emotional and behavior problems. Widely used measures with substantial empirical support include: (a) the Child Behavior Checklist – Parent Report Form (CBCL; Achenbach & Rescorla, 2001), with versions for ages 2–18 years; and (b) the Behavior Assessment System for Children – Second Edition (BASC-2; Reynolds & Kamphaus, 2004), with versions for ages 2–21 years.

Caregiver Symptoms. A comprehensive evaluation should also include the assessment of caregiver mental health that may influence the youth's adjustment. Depending on the nature of the presenting problems and intervention, a broad-spectrum assessment for mental health may be useful. For example, the Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1983) is a 90-item multidimensional symptom inventory on which respondents rate the degree of distress experienced across a variety of symptoms of psychological distress. Targeted assessment measures, such as the Beck Depression Inventory II (BDI-II; Beck, Steer, Brown, 1996) or Beck Anxiety Inventory (BAI; Beck & Steer, 1993), may also be useful. Additional assessments may include the Parenting Stress Index (PSI; Abidin, 1986), the Dyadic Adjustment Scale (DAS; Spanier, 1976), and the Quality of Marriage Index (QMI; Norton, 1983). The PSI is a 120-item self-report measure of stress associated with parenting and identification of dysfunctional parent–child relationships. The DAS is a 32-item scale designed to measure adjustment in relationships, whereas the six-item QMI measures overall marital satisfaction. The caregivers own maltreatment history can be assessed using the Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1997). The CTQ is a 28-item measure that retrospectively assesses five types of childhood maltreatment: sexual abuse, physical abuse, emotional abuse, emotional neglect, and physical neglect.

It is also important to assess caregiver reactions and responses to children's disclosure of abuse. For example, the Parent Emotional Response Questionnaire (Mannarino & Cohen, 1996) is a 15-item questionnaire used for assessing parental emotional reactions to their child's sexual abuse, including reactions such as sadness, guilt, anger, and embarrassment. Another measure, the Parent Support Questionnaire (Mannarino & Cohen) is a 19-item measure for evaluating parent's perceptions of their response to their child's sexual abuse.

Family Functioning and Coping. As stated above, CSA will likely impact broader family dynamics, making the assessment of overall family functioning an important aspect of any

evaluation. The Family Adaptability and Cohesion Evaluation Scales (FACES-III; Olson, 1986) is a 20-item self-report measure that assesses the respondent's perceptions of the current and ideal family systems across three categories: adaptability, cohesion, and family satisfaction. Also, the Family Crisis-Oriented Personal Evaluation Scales (F-COPES; McCubbin, Olson, & Larsen, 1987) is a 30-item assessment of effective problem-solving, coping attitudes, and behaviors used by families in response to problems or difficulties.

12.3 Maintenance Factors for CSA

12.3.1 Abuse-Related Factors

While it is important to acknowledge that findings have been inconsistent, several abuse characteristics have been repeatedly linked to more severe outcomes in sexually abused youth. First, the victim's relationship to the perpetrator, in particular, a close relationship with the perpetrator (e.g., father or father figure), has been associated with more severe symptomatology (Beitchman et al., 1992; Noll, Trickett, & Putnam, 2003). However, the relationship to the perpetrator has been inconsistently defined, and it might be more beneficial to assess the degree of the victim's emotional attachment to the perpetrator (Heflin & Deblinger, 2007; Kendall-Tackett et al., 1993). Second, victimization by multiple perpetrators has also been associated with increased psychological distress (Steel, Sanna, Hammond, Whipple, & Cross, 2004). Third, several studies have found use of force or threat of force to be related to increased symptomatology for sexually abused youth (Beitchman et al.; Briere & Elliott, 1994; Steel et al., 2004). Fourth, increased severity of abuse (i.e., more invasive or intimate sexual contact), such as vaginal, anal, or oral penetration, has been associated with more negative outcomes (Beitchman et al.; Kendall-Tackett et al.). Lastly, there is some empirical support for an association between longer duration and greater frequency of abuse and more negative outcomes (Kendall-Tackett et al.; Steel et al.). However, single-episode violent assaults are also associated with greater symptomatology (Beitchman et al.).

12.3.2 Familial Response to Disclosure

A growing body of empirical literature suggests that nonoffending caregivers' support following disclosure significantly influences adjustment and functioning of sexually abused youth, including overall level of distress and psychological symptoms (Elliott & Carnes, 2001; Mannarino & Cohen, 1996). In fact, some research indicates that parental support may be a better predictor of psychological adjustment than the abuse-related factors described above (Tremblay, Hebert, & Piche, 1999). However, it is not clear whether abuse-specific support or overall support in the parent–child relationship is a better predictor of short- and long-term adjustment (Elliott & Carnes). It is important to note that, according to Bolen and Lamb (2004), as many as one third of nonoffending caregivers oscillate in their level of support of their sexually abused child following disclosure. Thus, clinicians should encourage caregiver participation in the treatment process, which will provide parents (or guardians) opportunities to process their reactions, so that they can be available to support their child in an effective and consistent manner (Heflin & Deblinger, 2007).

12.3.3 Cognitive Attributions

Research suggests that certain patterns of cognitions are more common among sexually abused youth, including self-blame for negative events, the impression that the world is a dangerous place, and problematic attitudes (preoccupation with and/or aversion) toward sexuality (Cohen, Deblinger, Maedel, & Stauffer, 1999). Negative cognitive attributions, particularly those related to the abuse involving shame, powerlessness, and stigmatization, have shown a strong and persistent relationship with PTSD, depression, and low self-esteem (Feiring, Taska, & Lewis, 2002; Kallstrom-Fuqua, Weston, & Marshall, 2004). Moreover, internalization of childhood abuse, including a sense of powerlessness and stigmatization, has been associated with psychological distress in adulthood (Kallstrom-Fuqua et al., 2004; Steel et al., 2004).

12.4 Evidence-Based Treatment Approaches

The treatment of sexually abused youth is unique in that many children are referred for services due to the sexual abuse experience, and not necessarily because they are exhibiting clinical levels of emotional or behavioral symptoms. Parents often seek services based on concerns that the abuse will psychologically damage their child and/or to diminish the risk of future difficulties and revictimization (Finkelhor & Berliner, 1995; Wolfe, 2006). While several interventions have been used for victims of CSA, few have been systematically evaluated in controlled treatment outcome studies (Cohen, Berliner, & Mannarino, 2000). Methodological difficulties in CSA treatment research are also amplified by the fact that victimization does not have an inevitable pattern or a unified presentation of symptoms (Kendall-Tackett et al., 1993; Saywitz et al., 2000). In fact, sexual abuse itself is a heterogeneous act, consisting of numerous possibilities and experiences ranging from a single act of exhibitionism to sexual intercourse, and perpetrators varying from close family members to complete strangers.

Several types of psychosocial interventions are currently available to sexual abuse victims (Chaffin & Freidrich, 2004; Putnam, 2003; Saunders, Berliner, & Hanson, 2004), and recent research has produced enormous growth in our knowledge about effective treatments for traumatized youth (Cohen, 2005). Overall, meta-analytic results show a moderate effect size for psychosocial treatments reducing the effects of sexual and physical abuse (Skowron & Reinemann, 2005), with one treatment – Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) – accumulating the most empirical support. TF-CBT has been evaluated in multiple randomized clinical trials and is currently the only treatment for youth exposed to trauma to meet the well-established treatment criteria from the APA Division 12 Society of Clinical Psychology Task Force (Chambless & Hollon, 1998). Treatment components of TF-CBT include parenting skills, psychoeducation, cognitive processing, trauma narration, in vivo desensitization, and enhancing safety (Deblinger & Heflin, 1996). TF-CBT also includes a non-offending parent component designed to enhance parental support of the child, decrease the parent's own emotional distress following the abuse, and improve positive parenting practices. TF-CBT was designed to decrease PTSD symptoms, reduce negative emotional and behavioral responses, and correct maladaptive beliefs and attributions related to the abusive experiences in youth 3–18 years of age (Cohen; Cohen, Deblinger, Mannarino, & Steer, 2004; for more information on TF-CBT, Cohen, Mannarino, & Deblinger, 2006; Deblinger & Heflin; Deblinger, Mannarino, Cohen, & Steer, 2006). Moreover, TF-CBT has also been shown to be effective at

reducing PTSD symptomatology and maintaining treatment gains 6-months and 12-months posttreatment (Deblinger, Mannarino et al., 2006).

Although several treatment approaches exist, with the exception of TF-CBT, most lack well-controlled methodological research. Nevertheless, specific programs and techniques have been developed to address heterogeneous needs and abuse-specific sequelae (e.g., PTSD symptoms, sexual behaviors, depression, anxiety) of sexually abused youth and their families (Wolfe, 2006). More importantly, these programs have demonstrated increasing empirical support within an evidence-based framework. For instance, Bonner, Walker, and Berliner (1999) have developed a cognitive-behavioral group treatment designed to reduce the occurrence of inappropriate and/or aggressive sexual behavior in children. Another example, CBT for Sexually Abused Preschool Children (CBT-SAP; Cohen & Mannarino, 1996), showed significant improvements when compared to Nondirective Support Therapy. CBT-SAP contains strategies to address ambivalence toward the perpetrator, attributions regarding sexual abuse, inappropriate sexual behavior, and safety/assertiveness skills. Similarly, King et al. (2000), utilizing a CBT framework, found a reduction in PTSD symptoms in school-aged CSA survivors regardless of parental involvement in the therapeutic process. Lastly, Project SAFE (Sexual Abuse Family Education; Hansen et al., 1998) – a 12-week, cognitive-behavioral group treatment for sexually abused youth and their nonoffending caregivers – has demonstrated positive outcomes (e.g., increased self-esteem, less anxiety, fewer fears related to sex and victimization, and reduced feelings of loneliness and isolation) at posttreatment and again 3-months posttreatment (Campbell, Martin, Hubel, Flood, & Hansen, 2009; Hansen et al.; Hsu, Sedlar, Flood, & Hansen, 2002). Overall, the available research on the treatment of sexually abused youth is promising as shown by better outcomes for individuals who received trauma-focused CBT or abuse-specific CBT (Saywitz et al., 2000).

Traumatized children are increasingly receiving psychopharmacological interventions, despite the lack of randomized control trials of medication for CSA victims (Cohen, 2005). Psychopharmacological treatments have been used both independently and as adjuncts to psychosocial treatment approaches for PTSD (Wolfe, 2006). However, findings suggest that children often display a high rate of placebo response, such that many psychotropic medications that appear to be effective in open treatment trials are subsequently found to have equal efficacy as the placebo when subjected to double-blind randomized clinical trials (RCTs; Cohen). Thus, a lack of empirical research, concern about the effects of medications on developing brains, and family preferences for psychosocial interventions for youth have limited the use of pharmacological interventions for trauma (Cohen, Berliner, & Mannarino, 2003).

Treatment approaches for CSA also vary in a number of ways, including length, theoretical orientation, setting, and treatment participants. Services are often delivered in individual, group, or family formats (or some combination). Group interventions provide an opportunity for youth to share similar life-changing experiences with peers. Groups also provide an environment where support, normalization, and validation of experiences are readily available (Hecht, Chaffin, Bonner, Worley, & Lawson, 2002). Group interventions have been shown to be an effective form of treatment for CSA, including reducing PTSD symptoms, decreasing behavioral problems, and improving self-esteem and internalizing symptomatology (Avinger & Jones, 2007; Hetzel-Riggin, Brausch, & Montgomery, 2007).

Over the past 20 years, an expansive body of literature indicates that parental support following CSA disclosure is positively and significantly related to better emotional and behavioral adjustment in sexually abused youth (Elliott & Carnes, 2001). More specifically, several studies

have found that maternal support is critical to mediating the negative effects of CSA (Corcoran, 2004; Deblinger, Steer, & Lippman, 1999). Thus, the majority of rigorous studies have included parents in their treatment protocol (Deblinger et al., 1999; King et al., 2000). Nonoffending caregiver treatment is often conducted either in a parallel individual/group format (i.e., caregiver and child meeting concurrently but separately) or in conjoint sessions with the victim. Parental treatment usually contains abuse-related elements similar to treatment for abused youth, as well as additional components designed to reduce parental distress and teach behavior management strategies (Hecht et al., 2002). Available research suggests that parental involvement in CSA treatment effectively decreases externalizing behaviors and sexual behaviors, while improving adjustment in families after CSA has occurred (Corcoran; Saywitz et al., 2000).

As the research continues to grow, other issues will need to be addressed, including the replication and refinement of promising treatments, dissemination of effective interventions, and increased examination and inclusion of family members in treatment. For example, although nonoffending sibling treatment has not yet received significant research attention, sexual abuse impacts the entire family, and siblings may benefit from treatment (Campbell et al., 2009; Swenson & Hanson, 1998). For instance, in some cases, siblings may continue to be in direct contact with the perpetrator (e.g., perpetrator has partial custody and/or visitation privileges), placing them at risk in the future. Including nonoffending siblings in treatment provides siblings with the opportunity to discuss their thoughts and emotional reactions, address misinformation/misconceptions, and increase their understanding of their sibling's abusive experiences. Thus, sibling interventions may incorporate components designed to (a) address good and bad touches, (b) teach and practice assertiveness, (c) increase communication with the nonoffending caregiver, (d) discuss personal space, (e) differentiate between positive surprises and negative secrets, and (f) teach problem-solving techniques for risky situations (Campbell et al.).

12.5 Mechanisms of Change Underlying Interventions

Abuse-specific interventions are generally based on cognitive-behavioral principles that have proven effective for a variety of conditions (Berliner & Elliott, 2002). There are several common components across CSA treatments that are believed to embody the underlying mechanisms responsible for positive treatment outcomes with sexually abused youth, including psychoeducation, anxiety management, exposure, and cognitive coping (Berliner & Elliott), as well as behavior management and social support. To date, however, no dismantling studies have been conducted to examine the relative efficacy of treatment components.

12.5.1 Psychoeducation

Psychoeducation is often a starting point for many CSA interventions, particularly with youth who are uncomfortable talking about their abuse experience (Deblinger, Behl, & Glickman, 2006). Psychoeducation helps youth normalize their feelings related to the sexual abuse experience by addressing how their feelings and beliefs are similar to those of other sexually abused children (Swenson & Hanson, 1998). Information provided during psychoeducation typically includes a definition of CSA, prevalence of CSA, description of victims and perpetrators, why perpetrators offend, and how children respond to abuse (Deblinger, Behl et al., 2006;

Hansen et al., 1998). Providing normative information about CSA helps to introduce the topic of CSA for discussion and prepares children for future discussion of their own abuse experiences. Normative sexual development information is often included in the psychoeducation portion of CSA treatment. According to Deblinger and Heflin (1996), sex education is particularly important for sexually abused children for four reasons: (a) it is critical that youth receive accurate information to correct any misconceptions that may have developed as a result of their abusive experience; (b) sex education may reduce a victim's vulnerability to revictimization, premature sexual activity, and/or adult sexual dysfunction; (c) sex education may be incorporated into the gradual exposure process for youth who avoid discussions of sexual issues because it precipitates memories of the experience; and (d) through the sexual education process, adults have the opportunity to model appropriate conversations related to sexual issues. Sexual education can also facilitate discussions about body ownership, appropriate personal space, as well as good and bad touches.

12.5.2 Anxiety Management

Anxiety management refers to teaching youth how to utilize various relaxation and emotional/cognitive coping strategies to reduce fearful and anxious responses to abuse-related memories (Berliner & Elliott, 2002). Most treatments employ and/or adapt some form of relaxation training to help youth cope with their psychological distress. Techniques include breathing retraining, progressive muscle relaxation, and guided imagery. Children are also encouraged to identify personal means of relaxation such as listening to music, reading, journaling, participating in sports, and so forth. Relaxation skills should work to reduce anxious and avoidant behavior by helping children to control their emotions and providing them with a sense of control over their emotions.

12.5.3 Exposure

Gradual exposure is often regarded as the central and critical component of many CSA treatments. Utilizing this technique, youth are gradually exposed to thoughts, memories, and other reminders of the abusive experience until they are able to tolerate those memories without significant emotional distress, thereby eliminating the avoidance of abuse-related cognitions (Deblinger & Heflin, 1996). Techniques may involve direct discussions, narratives, drawings, imagination, or visualizations of the traumatic event in a graduated manner (Cohen et al., 2000). After becoming more comfortable discussing the abuse, youth will be better able to pursue cognitive and affective processing of their experiences (Deblinger & Heflin). Processing the experience then provides opportunities to correct misconceptions, enhance their cognitive understanding of the abuse, and clarify their emotional response to their abusive experiences.

12.5.4 Cognitive Coping

Cognitive coping techniques are often used in CSA interventions to challenge and replace cognitive distortions about the abusive experience and/or generalized negative attributions about themselves or others (Berliner & Elliott, 2002). Techniques used to correct negative

automatic thoughts and maladaptive thinking errors include cognitive restructuring, guided self-dialogue, and thought stopping (Deblinger, McLeer, & Henry, 1990). Cognitive coping can diminish/eliminate cognitive attribution difficulties such as self-blame for negative events, the impression that the world is a dangerous place, and problematic attitudes (preoccupation with and/or aversion) toward sexuality.

12.5.5 Behavior Management

As previously noted, CBT approaches for CSA treatment often include nonoffending caregiver components conducted either in a parallel individual or group format or in conjoint sessions with the victim. These parental interventions typically entail comparable components to those described above (e.g., psychoeducation, cognitive coping), although at a different developmentally appropriate level. In addition, maltreated youth may display disruptive behaviors that could result from maltreatment or stem from disordered family interactions – possibly placing them at risk for future maltreatment (Lutzker, Van Hasselt, Bigelow, Greene, & Kessler, 1998). Therefore, behavior management strategies may also be incorporated into nonoffending caregiver treatment (Cohen et al., 2000). A detailed description of behavior management strategies is beyond the scope of this chapter, but a number of evidence-based interventions are available (Barkley, 1997; Barkley, Edwards, & Robin, 1999; Hembree-Kigin & McNeil, 1995; McMahon & Forehand, 2003).

12.5.6 Social Support

Both theoretical and empirical literature suggest that children's emotional and behavioral adjustment following abuse is linked to the reactions and support they receive from caregivers (Elliott & Carnes, 2001). Empirical research suggests that sexually abused youth who have a supportive caregiver exhibit fewer symptoms of distress (Esparza, 1993; Morrison & Clavenna-Valleroy, 1998), as well as fewer abuse-specific symptoms (Leifer, Shapiro, & Kassem, 1993) when compared to youth without social support. Moreover, research suggests that the association between higher social support and better adjustment is evident regardless of whether the level of supportiveness and psychological adjustment is rated by the youth, caregiver, or mental health professional (Elliott & Carnes; Esparza; Mannarino & Cohen, 1996). Notably, empirical research also suggests that social support is beneficial for the nonoffending caregiver following the disclosure of abuse. Studies suggest that parents with less social/environmental support are more distressed (Hiebert-Murphy, 1998) and less supportive of their children (Leifer et al., 1993). Thus, the inclusion of nonoffending caregivers in the therapeutic process may be a critical component.

12.6 Basic Competencies of the Clinician

The American Psychological Association (APA, 2002) requires that psychologists provide services that are within the limits of their competency based on education, training, supervision, consultation, study, and clinical experience. However, the APA ethical guidelines do not provide information on what constitutes clinical competencies or what criteria need to be met in

order to be considered competent. Thus, difficulties exist for clinicians working with special populations wherein unique skills often go undefined. Recently, professional agencies have been developing guidelines and practice parameters to clarify the skills that constitute clinical competencies with specialized populations.

In 1988, the APA's Interdivisional Task Force on Child Abuse Training suggested that mental health professionals within the field of child maltreatment have competencies in child development, parent–child interactions, assessment and treatment of child maltreatment, and forensic issues (Garbarino, 1988). In 1996, an APA Task Force on Child Abuse and Neglect developed guidelines for mental health professionals that emphasized competencies in defining and recognizing child maltreatment, theories of abuse, working with interdisciplinary teams, ethical issues, assessment, and treatment related to child maltreatment (APA Child Abuse and Neglect Working Group, 1996; Haugaard et al., 1995). Clinicians specializing in CSA should further broaden their clinical competencies across a variety of realms. These competencies can be thought of at both basic (i.e., minimal competency that all practitioners must have in order to practice) and expert levels (i.e., demonstrating skills beyond the fundamental standards necessary – possessing knowledge deemed adequate to provide clinical supervision and/or scientific contribution to the field). An expansive and comprehensive guide to clinical competencies in working with children is beyond the scope of this chapter. However, more information can be found in the *Handbook of Clinical Psychology Competencies* (see ❯ volume 1, chapter 1).

12.6.1 Using an Evidence-Based Practice Approach for Treatment of CSA

Practitioners working with sexually abused youth should apply an evidenced-based practice (EBP) approach, which the APA has defined as "the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences" (APA, 2006, p. 273). The first component suggests that, when making treatment decisions for youth, clinicians must be guided by the strongest empirical evidence available, with evidence viewed hierarchically (i.e., clinical anecdote and uncontrolled case studies at the bottom, and randomized controlled trials at the top). Clinical expertise, the second component, refers to the skills needed to assess, diagnose, and implement a treatment following disclosure (APA, 2006). The final component considers not only ethnic diversity, but also a variety of values and individual differences that exist (APA), such as developmental issues, diversity considerations, and familial stressors related to CSA. Moreover, clients should also be informed about the probability that they will benefit from the evidence-based approaches, as well as the relative efficacy of any alternate empirically supported treatments. Application of the EBP standard to CSA suggests that clinicians offering services to sexually abused youth need the following basic competencies.

12.6.2 Fundamental Scientific Knowledge of CSA Symptoms and Treatment

Scientific knowledge of CSA involves a general understanding of traumatic stress and the impact of CSA on children and families. For example, clinicians should be familiar with the definitional and prevalence issues related to CSA (described previously in this chapter), since psychoeducation is an introductory component of most treatments. In addition, professionals

should have a basic understanding of the research on theoretical models of CSA impact (Freeman & Morris, 2001; Spaccarelli, 1994) and the consequences and correlates of maltreatment, including factors that may mediate or moderate the heterogeneous effects of CSA (Kendall-Tackett et al., 1993; Tyler, 2002).

Clinicians should also be aware of evidence-based treatments, such as those described earlier, and related effectiveness in symptom reduction for children who have experienced CSA. It is also important for clinicians to be aware of current trends in the scientific literature and growing concerns or controversies in the field of maltreatment. For instance, while there has been increased awareness of the possibility of false allegations and false "recovered" memories (Loftus & Davis, 2006), there has also been concern that fears regarding the suggestibility of children have gone too far and may prevent some children from being believed and/or questions to not be asked for fear of producing false allegations (Everson & Boat, 1989; Lawson & Chaffin, 1992).

Resources for staying current on research findings include professional journals, books, conferences, and workshops. In addition, valuable information is available via government agencies, professional organizations, and research centers, including the Office of Victims of Crime, the American Professional Society on the Abuse of Children (APSAC), and the National Child Traumatic Stress Network. Increasingly, these organizations make information available via the Internet, including training programs (e.g., the TF-CBT web site, tfcbt.musc.edu).

12.6.3 Fundamental Case Conceptualization Skills

According to Persons and Davidson (2001), a case conceptualization provides a systematic method for developing a working hypothesis (formulation) about the mechanisms underlying client symptomatology, developing a treatment plan based on the formulation, and evaluating the outcome of the treatment plan. Case conceptualizations should inform treatment decisions related to appropriateness of various CSA treatments, modifications that may be needed to increase the effectiveness of treatment, and evaluation of the ability to treat the case. Case conceptualization in CSA requires that the clinician considers a myriad of factors, including but not limited to, the following: (a) age and developmental level of the child, (b) severity and chronicity of current symptom presentation, (c) preexisiting psychopathology or comorbid disorders, (d) psychosocial stressors, (e) parental psychopathology and distress, (f) family support and functioning, and (g) abuse characteristics and prior/multiple trauma.

A thorough understanding of the case should also guide assessment-related decisions (i.e., the assessment of initial CSA symptomatology as well as ongoing and posttreatment evaluations). As noted above, sexually abused youth are often referred for services because of the experience and not necessarily due to clinically significant symptom presentation. Therefore, practitioners should take into account the heterogeneous symptom presentation (with as many as 21–49% sexually abused youth presenting as subclinical; Kendall-Tackett et al., 1993), and incorporate a variety of measures that assess for internalizing and externalizing symptomatology.

12.6.4 Establishing Rapport and Therapeutic Alliance

According to Rogers (1992), *rapport*, the warm relationship between the therapist and the client must be established if any progress is to be made. Rapport requires a genuine interest in the

individual, and successful rapport constitutes a personal bond whereby the therapist helps build client confidence and trust, which makes subsequent elements in the treatment process possible (Rogers). The *therapeutic alliance* is a complex interaction between the clinician and the client, each of whom brings to treatment his or her own characteristics, personality, and history (Gelso & Carter, 1994). Youth who develop emotional bonds and alliance with their therapist are more likely to be active in treatment-related tasks, increasing the likelihood of positive treatment outcomes (Karver, Handelsman, Fields, & Bickman, 2006).

The clinician's ability to establish rapport and therapeutic alliance may be especially relevant to sexually abused youth who could be experiencing difficulties with trust. Relatedly, the importance of rapport and alliance is increased by the fact that exposure to the distressing memories is a core component of most CSA treatments. Preferably, exposure should include client-directed verbal descriptions of important trauma details, but most children experience difficulties discussing their abusive experience and skillfully avoid activities that require them to remember or discuss abuse-related topics (Wolfe, 2006). It is important to note that pushing children to talk, having a formal interpersonal style, and sharing similar experiences may hinder the development of the therapeutic alliance (Creed & Kendall, 2005). Therefore, avoidant youth (after becoming comfortable with their therapist through rapport building exercises) may benefit from gradually discussing their abusive experience and clinicians may include both verbal and nonverbal means to express trauma-related feelings and thoughts (e.g., play, art, drama; Wolfe). Additionally, key factors linked to strong therapeutic alliance and improved symptom outcomes and family functioning include (a) developing and using a collaborative approach to therapy; (b) establishing treatment goals together; and (c) presenting treatment as focused on family relationships (Creed & Kendall).

Clinicians might expect initial difficulties forming an alliance with sexually abused youth, although they should be able to develop and maintain a strong alliance over time. A strong therapeutic alliance with children who have experienced CSA should involve empathy, tolerance of affect and emotional responses, and a collaborative nature. Children may express a variety of cognitive and emotional reactions following disclosure such as embarrassment, anger, and/or guilt and the clinician must remain supportive while gently correcting any misconceptions (e.g., they are to blame for what happened, sexual abuse is limited to their family). In many cases, a strong therapeutic alliance may also be necessary between the clinician and the caregiver(s) who may be experiencing stressors associated with disclosure (e.g., separation from a partner, moving, finances, decreased social support; Corcoran, 2004). Additionally, caregivers with their own abuse history report higher levels of psychological distress following the disclosure of abuse which may impede their ability to provide support to their child (Bergin, 2001). Moreover, in some circumstances, caregivers may be experiencing increased distress related to their own CPS investigation for failure to protect their children from sexual abuse. Thus, it is important that the clinician be empathetic and understanding of the emotional reaction of the entire family.

12.6.5 Treatment Planning

Heterogeneity of symptom presentation in sexually abused youth can present a challenge when making treatment decisions. Potential factors to consider when developing a treatment plan include, but are not limited to, the following: (a) chronological age of the child; (b) developmental

level; (c) risk factors for revictimization; (d) abuse-related characteristics (e.g., noncontact, fondling, penetration); (e) current symptomatology, severity, and psychosocial impairments; (f) comorbid disorders; (g) family functioning and support; and (h) other psychosocial stressors for the family.

Clinicians must also identify the treatment modalities that best meet the needs of the youth and family (e.g., individual, family, group). More individualized treatment approaches have the advantage of being able to be adjusted to the specific needs of the client. Group treatments can provide a valuable opportunity to learn from peers, may provide asymptomatic children with education on boundaries, and allow the clinician to further assess functioning without having them participate in intense exposures (Olafson & Boat, 2000). Contrarily, group treatment may not be appropriate for children exhibiting severe internalizing or externalizing behaviors, or with serious developmental delays (Hecht et al., 2002).

As described earlier, caregiver distress and support can significantly impact a youth's symptom presentation. Thus, clinicians should incorporate nonoffending caregivers into treatment when possible. It is also important to consider both the child and family's attitudes and acceptance of the intervention to maximize treatment compliance. For instance, if a caregiver or child is uncomfortable with exposure, a strong rationale for the treatment must be presented to encourage client commitment and treatment adherence.

Practitioners must also consider applicability of various treatments for CSA. For example, the clinician needs to ascertain the availability of the treatment, such as access to necessary manuals or resources, and the affordability of the treatment for the client. Most importantly, the clinician must consider his/her level of training and expertise. According the APA (2002) ethical guidelines, psychologists can only provide services within their scope of practice and for which they have established competency through training, education, experience, or consultation. It is important that clinicians evaluate their skill level and seek out training opportunities in treatments for CSA due to the discomfort some clinicians may feel when using exposure and cognitive restructuring techniques (Cohen et al., 2006). Practitioners who are unfamiliar with conducting exposure techniques for other anxiety disorders may not be prepared to address problems presented by PTSD clients (Becker, Zayfert, & Anderson, 2004). Thus, inexperienced clinicians should either seek out supervision or consultation when implementing treatments for CSA in which they do not feel proficient. In some cases, referrals to professionals with more specialized training and experience with CSA may be the ethically appropriate solution.

12.6.6 Monitoring Treatment Progress

Mental health professionals should monitor progress throughout treatment, rather than limiting assessment to pretreatment and posttreatment, in order to examine the effectiveness of the intervention. This continuous examination and evaluation can also guide necessary modifications to the case conceptualization and/or treatment plan, if symptom reduction is not achieved or additional symptoms emerge. In most cases, empirically validated assessment measures should be used to monitor treatment progress and changes in client symptomatology (e.g., CITES, WPS-C, WPS-P). However, the development of idiographic measures may be necessary to assess for symptomatology or factors that are unique to the client or population of youth served.

Clinicians should also identify factors that may impede treatment adherence and monitor such factors throughout treatment. For example, abuse-related distress may interfere with treatment commitment, compliance, and positive outcomes for youth. In addition, caregivers with their own maltreatment history may experience PTSD symptoms and general psychological distress following the disclosure of abuse (Timmons-Mitchell et al., 1997). Clinicians should address avoidance (e.g., openly discuss the temptations to cancel prior to exposures) and utilize a variety of techniques (e.g., psychoeducation, normalizing) to reduce abuse-related distress that occurs within the family during initial sessions. Other common challenges to CSA treatment adherence include unclear rationale for treatment and parental devaluation of the importance of treatment (Lane, Dubowitz, & Harrington, 2002). Lastly, practitioners should assess and address physical barriers (e.g., lack of transportation, lack of childcare, financial difficulties) at the outset of treatment to increase adherence and success.

12.6.7 Modifying Treatments

When therapists are novices and unfamiliar with CSA treatment approaches, they may feel uncomfortable adapting or individualizing treatment components, potentially leading to temptations to apply a "one size fits all" model or a "cookbook" approach to therapy. However, clients (and clinicians) do not necessarily conform to the strict expectations of manualized treatments, which are the standard in rigorous treatment outcome studies. Due to the heterogeneous nature of the CSA experience, the varied symptomatology, and the unique experiences that families encounter following the disclosure, it is critically important for practitioners to possess the ability to modify treatments if and when necessary to match client characteristics. Following the EBP framework, clinicians should base modifications on the best research evidence available, as well as prior data gathered from continuously monitoring treatment to inform treatment modification decisions. Modifications include, but are not limited to, the following: (a) lengthening or adding sessions, (b) eliminating components that are not relevant for the client, (c) modifying or adding components to address particularly difficult issues, and (d) modifying treatment to address developmental or cultural concerns. As one might expect, the modification of treatment generally requires a higher level of expertise, and beginning practitioners should seek consultation/supervision prior to modifying treatment plans.

12.6.8 Understanding Developmental Considerations Involved in Assessment and Treatment for CSA

Not surprisingly, practitioners working with children in general, and specialized populations such as sexually abused youth in particular, must be knowledgeable in developmental psychopathology and consider developmental issues throughout the assessment and treatment planning/implementation process. Empirical research indicates that the impact of abuse may manifest differently at varying developmental stages. As summarized in recent literature reviews (Kendall-Tackett et al., 1993; Tyler, 2002), common symptoms for each developmental period include:

- *Early childhood* – anxiety, nightmares, PTSD symptoms, inappropriate sexual behavior, as well as other internalizing and externalizing behaviors
- *Middle childhood* – anxiety, depression, anger or aggression, nightmares, hyperactivity, regressive behavior, inappropriate sexual behavior, sexual anxiety, suicidal ideation, and difficulties with school
- *Adolescence* – depression, withdrawal, low self-esteem, self-injurious and suicidal behaviors, illegal acts, substance abuse, risky sexual behavior, and pregnancy

Developmental theories of CSA suggest that abuse interferes with the development of the child with regard to social and self-functioning and may later manifest in psychopathology (Spaccarelli, 1994). In general, clinicians should consider the child's reading level, writing abilities, language comprehension, and cognitive abilities in comparison to those required by the assessment or treatment. Practitioners working with adolescents are more likely to utilize both cognitive and behavioral strategies (e.g., cognitive coping), whereas younger children may benefit more from behavioral skill-building exercises through the use of games (e.g., feelings charades).

12.6.9 Understanding Diversity Consideration Involved in Assessment and Treatment for CSA

Practitioners utilizing an evidence-based approach should always take into account a variety of client factors when planning and implementing treatment including, but not limited to, gender, culture, ethnicity, sexual orientation, and the client's personal preferences. Cultural influences may impact symptom expression in sexually abused youth (Mennen, 1995; Shaw, Lewis, Loeb, Rosado, & Rodriguez, 2001), and expectations for development (e.g., what is considered adaptive behaviors, appropriate parenting practices, family patterns, etc.) may vary according to cultural contexts (Pumariega, 2003). Clinicians should be culturally sensitive and should continually adapt and incorporate strategies in the assessment and treatment process to match unique cultural needs. Thus, clinicians need to understand, recognize, and address diversity issues that might impact treatment progress. Common factors clinicians should consider when working with diverse families include: (a) the primary language of the client, the client's proficiency in the clinician's primary language, and the appropriateness of an interpreter; (b) socioeconomic status; (c) education level; (d) incorporation of culturally relevant information into treatment; (e) adaptability of items and activities to client's culture; and (f) availability of supports and resources, including extended family.

12.6.10 Understanding Life Stressors and Challenges in Assessment and Treatment of CSA

Professionals must anticipate and recognize a variety of challenges that contribute to difficulties in implementing treatments for families who have experienced CSA. Factors that may impede treatment include poverty, lack of transportation, unstable home environment, family stressors (e.g., childcare, legal system), social isolation, and lack of family/community resources. Following disclosure, parents may experience a variety of stressors such as separation/divorce, moving, reduced social support network, and participation in criminal and/or civil legal

litigations (Corcoran, 2004). Families in which the perpetrator was a parent or spouse may face added financial burdens due to a loss of the perpetrator's income, and may have difficulties affording treatment. Clinicians working with financially challenged families may provide services on a sliding scale, offer a payment schedule, or refer clients to other CSA competent agencies/professionals with more flexible payment plans. Clinicians should also refer families to community resources (e.g., Child Advocacy Centers, community action programs) that may connect them with needs, such as housing and transportation assistance, interpreters, and material resources. Overall, practitioners should have an understanding of the stressors related to CSA disclosure and the ability to recognize unique factors that might impact treatment. More importantly, clinicians should possess the ability to generate strategies to address such challenges to increase treatment adherence and effectiveness.

12.6.11 Evaluating and Monitoring Legal, Ethical, and CPS Concerns

Clinicians working with sexually abused youth must be able to assess, monitor, and act on ethical issues that arise throughout assessment and treatment. This requires them to have a basic knowledge of ethical principles, standards of professional conduct, as well as legal and forensic issues. For example, the APA ethical guidelines and code of conduct (APA, 2002) are the basic standards by which all psychologists must abide. In addition, work with CSA involves the application of additional practice standards. Organizations such as the American Professional Society on the Abuse of Children (APSAC) and the American Academy of Child and Adolescent Psychiatry (AACAP) have developed guidelines and practice parameters for mental health professionals conducting forensic interviews with children who have experienced CSA (AACAP, 1997; APSAC, 1995, 1997).

On a basic level, mental health professionals working with CSA will face legal and ethical issues involving confidentiality, multiple roles, mandated reporting, third parties, and court involvement (Kalichman, 1999). As with any client, clinicians working with CSA are required to protect the youth's privacy, maintain appropriate documentation of client's records while maintaining confidentiality (APA). While all records are deemed confidential, regulations regarding appropriate documentation (and who is privy to these records) vary across states (Myers, 2002), and it is generally the practitioner's responsibility to remain current on regulations related to files and documentation. Although the child's legal guardian has the right to know detailed information on what is discussed during session, this can cause youth who have experienced sexual abuse to hesitantly participate in therapy. Therefore, it may be beneficial to advise parents to allow youth to share as much or as little about the contents of each session in order for them to feel more comfortable in treatment, with a detailed understanding (with both the parent and the client) that safety concerns (e.g., self-harm, suicidal ideation, promiscuity, unprotected sex) must be reported. This allows youth to discuss and process a variety of topics including family issues, parental reactions to disclosure of abuse, parental support, as well as dating and sexual relationships.

Treatment for sexually abused youth often entails working with the entire nuclear family, and clinicians must be cognizant of ethical situations that may arise from having multiple roles within the family. The APA (2002) ethics code requires that clinicians working with families identify the primary client and the relationship that the clinician will have with each family member. Although treatment may include parents and siblings of sexually abused youth, the

primary client is almost always the abused youth, and all components of the assessment and treatment process should reflect that fact.

Psychologists and other mental health practitioners are mandated reporters and required to report suspected child abuse, elder abuse, and/or harm to self or others (Kalichman, 1999). Clinicians working with families who have experienced CSA should be prepared to report disclosures of abuse from other family members such as siblings who previously denied abuse. Clinicians must also report incidents when parents violate court orders, such as when the parent allows the perpetrator to be alone with the child. Further, clinicians often have to work with third parties such as CPS or attorneys due to the legal processes involved in reporting and prosecuting CSA. Clinicians should make sure they know the appropriate rules and regulations governing subpoenaed records. When releasing information to third parties, clinicians should discuss this process with the client and keep them informed of progress.

In cases with court involvement, the clinician should work with the family to provide support and guidance while their case proceeds through the legal system. Clinicians may also be called upon to discuss the effects of CSA on the child, or in cases in which a forensic interview was conducted by the clinician, he or she may be asked to describe the veracity of the reported abuse. However, treating clinicians typically do not play a role in the forensic interview process and should therefore avoid providing testimony with regard to the veracity of abuse allegations (Mannarino & Cohen, 2001). Clinicians should always seek consultation in legal matters for which they are inexperienced.

12.6.12 Evaluating and Monitoring Risk of Harm to Self and/or Others

Mental health professionals are required by law to act when there is a threat of self-harm or harm to others (APA, 2002). This is particularly salient for clinicians working with sexually abused youth since CSA has been associated with an increased risk self-harm and suicidal ideation (Glassman, Weierich, Hooley, Deliberto, & Nock, 2007; Nock & Kessler, 2006). Clinicians must have an understanding of what constitutes a significant risk (e.g., cutting, self-burning, suicidal plans) and what behaviors require continuous monitoring and follow-up (e.g., suicidal thoughts). If there is risk for self-harm or suicidal behaviors, the clinician must be able to develop a safety plan up to and including inpatient hospitalization. If confidentiality must be broken based on client's disclosure of self-harm or suicidal behaviors, it is often beneficial to discuss concerns with the youth first and encourage them to disclose to their caregivers with the clinician's supervision and support. If the client refuses to discuss the topic with their caregiver(s), it is the clinician's responsibility to immediately communicate concerns with the caregivers who are often critical in implementing a safety plan. Use of clinical skills, such as interpersonal sensitivity and developing a therapeutic alliance, are paramount when assessing for risk. For more information on assessing and treating children with suicidal behaviors, please refer to the guidelines available through the American Academy of Child and Adolescent Psychiatry (AACAP, 2001). In general, all mental health professionals should seek consultation when faced with complex issues of self-harm and suicidal behaviors.

Clinicians must also be able to recognize and assess risk of harm to others (APA, 2002). As mandated reporters, clinicians have a duty to warn the individual in danger and should be aware of any relevant state laws regarding their duty to warn (*Tarasoff* v. *Regents of the University of California*, 1974/1976). This issue may arise in the context of therapy with parents expressing

anger towards the perpetrator. Parents often express intense anger with the perpetrator, and clinicians must differentiate between comments that allow the parents to vent their emotions and comments that express actual intent to seek revenge on the perpetrator. Clinicians may also face duty to warn issues when working with sexually abused youth exhibiting externalizing or sexual behavior problems. For example, a large number of abused youth subsequently display inappropriate sexual behaviors, potentially placing them at risk for perpetrating on other children (Friedrich et al., 2001; Kendall-Tackett et al., 1993). The type of sexual behaviors displayed should be assessed, and clinicians must determine the likelihood of these children sexually assaulting others. Overall, when examining risk to others clinicians should start by assessing for (a) a detailed plan; (b) access to weapons; (c) contact with the individual in danger; and (d) whether the individual in question would act on the plan. Again, practitioners should seek supervision or consultation when faced with issues related to the duty to warn.

12.6.13 Working in an Interdisciplinary Context

Thus far, the focus of the basic competencies has been on tailored individualized care; however, clinicians working with children who have experienced CSA must recognize that children are embedded within multiple systems and often need coordinated care (Wolfe, 2006). Practitioners working with children frequently interact with outside agencies, in addition to legal, school, family, medical, and other mental health professionals during the course of treatment. At the most basic level, clinicians must be able to interact with other agencies and professionals in a variety of contexts (e.g., referrals, retrieve records, communicate progress, etc.). For this reason, it is often beneficial for clinicians to conceptualize treatment within a social ecological framework (Bronfenbrenner, 1979). Children may already be receiving services from multiple agencies (e.g., school, primary care, child welfare, juvenile justice, etc.), and establishing a working relationship with professionals from different agencies is paramount in coordinating and enhancing treatment outcomes. Just as clinicians would work to develop a therapeutic alliance with a client, clinicians must also be able to develop a working alliance with individuals from interdisciplinary teams. Clinicians must be effective at communicating the needs of the child as well as what services the agency is expected to provide. This may require the clinician to address and define problems, negotiate a goal with the agency, correct discrepancies over expectations, provide solutions to problems, and implement a plan that addresses the needs of all parties involved.

12.6.14 Understanding the Effects of Medication on Treatment for CSA

As noted above, increasingly more traumatized youth are receiving pharmacological interventions, particularly for PTSD symptomatology. However, to date, no medication has been approved by the US Food and Drug Administration (FDA) for PTSD with children and adolescents (Wolfe, 2006). Thus, clinicians must consider reasons why a medication consultation might be valid. For example, medication may be valuable for improving outcomes for sexually abused youth with an unmedicated comorbid diagnosis of ADHD, who are exhibiting behavior problems and having difficulty staying on task during treatment. Also, in extreme cases of childhood anxiety, children may find it hard to talk about the abuse or may be reluctant to

participate in exposures. It may be beneficial for these children to receive combined treatments, which will allow them to focus more during treatment and participate in important aspects of treatment.

Due to increased attention related to medication treatment for trauma, depression, and PTSD symptomatology, clinicians must be knowledgeable about not only pharmacological interventions, but also alternatives to medications and, more importantly, have the ability to communicate options to caregivers. For instance, practitioners may want to inform clients that TF-CBT has also been shown to be effective at reducing PTSD symptomatology and maintaining treatment gains at 6-months and 12-months posttreatment without the use of medications (Deblinger, Mannarino, et al., 2006). Clinicians should always seek collaboration with families and primary care physicians when making abuse-related treatment decisions that may involve medication.

Lastly, although physicians and psychiatrists have traditionally been the professionals responsible for prescribing psychotropic medication, there is a growing movement in the field advocating for psychologists' prescription privileges. In fact, some states have successfully passed legislation that enables psychologists to prescribe psychotropic medications (Lavoie & Barone, 2006). If this trend continues, medically trained psychologists would possess additional training and expert competencies in psychopharmacology. Such psychologists would be able to determine whether to prescribe (or unprescribe) medications for sexually abused youth and provide medication consultation to other professionals not trained in psychopharmacology.

12.7   Expert Competencies of the Clinician

The purpose of the previous section was to provide practitioners with detailed suggestions for the basic standards necessary to demonstrate clinical competency when working with sexually abused youth. Expanding upon this foundational framework, the following section describes expert competencies in the realm of CSA. The competencies listed below build upon the basic competencies detailed in the previous section, highlighting skills advanced clinicians possess, and utilize when working with abused youth. Expert competencies should be thought of as the highest level a clinician can achieve, with an understanding that expertise in an expansive field requires continuous effort and energy. Therefore, development of expert competencies should be viewed as the ongoing integration of a collection of skills requiring a systematic approach to accomplish and maintain.

12.7.1 Advanced Scientific Knowledge of CSA Symptoms and Treatment

Advanced clinicians with CSA expertise not only possess a thorough knowledge of the research literature, but they also have the ability to apply their knowledge to the assessment and treatment process. For example, expert clinicians (a) have theoretical perspectives on the impact of CSA and selection of treatments, (b) understand the influence of the maintenance factors described above (e.g., abuse characteristics, familial response to disclosure, and cognitive attributions), (c) have an in-depth understanding of the mechanisms for change, and (d) have extensive knowledge of evidence-based CSA-related therapeutic techniques.

Due to the ever-changing and expansive nature of CSA literature, clinicians must take active steps to remain current within the field. Advanced practitioners benefit from, and likely contribute back, to the field via journal articles, conference presentations and workshops, and professional organizations (e.g., APSAC; APA Division 37, Section on Child Maltreatment). These contributions are critical to the development of the field and build a better understanding of the short- and long-term sequelae associated with CSA. Contributions should come from both academic researchers as well as practicing clinicians who provide invaluable information on the implementation and effectiveness of CSA treatment in "real world" clinical settings.

However, a thorough knowledge of CSA alone is not enough, and expert clinicians often incorporate information from other areas of psychology and outside fields to effectively treat families. Practitioners should remain current in the scientific literature of related fields that potentially impact the assessment and treatment of sexually abused youth (e.g., research on anxiety or other forms of trauma). For instance, there is increased use of psychopharmacological treatments for disorders commonly experienced by maltreated youth. Advanced clinicians with knowledge in a variety of scientific realms are better able to provide evidence-based rationale for or against different treatment approaches.

12.7.2 Advanced Case Conceptualization

As previously mentioned, sexually abused youth have a heterogeneous emotional and behavioral response following the traumatic event(s) resulting in a wide range of symptomatology (including asymptomatic or subclinical presentation). Expert clinicians are able to (a) differentiate between developmentally normal and abnormal behavior, (b) assess for comorbid diagnoses, and (c) make differential diagnoses. Furthermore, experienced clinicians take a systematic approach to develop a comprehensive case conceptualization, oftentimes combining and integrating several competencies in the area of CSA (e.g., diversity considerations, developmental considerations, scientific knowledge of CSA, parental factors). Moreover, advanced clinicians utilize a systemic and/or ecological framework in their case conceptualization. Expert clinicians readily adjust and adapt to new information disclosed by the family and other agencies; refining their case conceptualization and modifying their treatment plan based on the new material presented. Expert clinicians are also able to clearly communicate the conceptualization and treatment options to parents and children.

12.7.3 Advanced Rapport Building and Therapeutic Alliance

Developing rapport and a strong therapeutic alliance with the client is necessary but not solely sufficient for the effective treatment of CSA. Before treatment can be implemented the family must "buy in" to the treatment approach, and expert clinicians can enhance rapport and alliance in a number of ways, including (a) normalize feelings related to the sexual abuse experience, (b) address any reluctance to participate in treatment, (c) collaboratively develop treatment goals; (d) comfortably explain the different components and options for treatment, (e) describe how the selected treatment specifically addresses the families' needs, and (f) address confusion, questions, and concerns that arise. A collaborative approach may improve the family's

commitment to treatment, whereas disagreements on goals and approach may result in resistance from the family, impede treatment, and hinder the therapeutic relationships.

Expert competencies in this area also involve recognizing issues immediately after (if not before) they arise and addressing issues in an expeditious manner that maintains rapport. Experienced clinicians demonstrate problem-solving skills when factors emerge that may impede treatment adherence and outcomes. Resistance is associated with dropout and can take the form of arguing, interrupting, negating, and ignoring (Miller & Rollnick, 2002). For resistant clients, expert clinicians are likely to employ additional techniques such as motivational interviewing skills (e.g., shifting focus, reframing, emphasizing personal choice and control; Miller & Rollnick).

12.7.4 Expertise in Planning, Monitoring, and Modifying Treatment

In general, practitioners should take an evidence-based approach to treatment of CSA (i.e., combining the best available research with clinical expertise in the context of patient characteristics, culture, and preferences). However, more advanced CSA clinicians have the ability to more efficiently and effectively integrate client information and current empirical research into the treatment process. Moreover, experienced clinicians oftentimes can predict when change is expected or when a reemergence of symptoms may occur and incorporate this information into their treatment plan. For example, a clinician may plan a booster session after court proceedings to address any concerns or reemergence of symptoms that may have emerged during the trial. Beyond applying scientific knowledge to treatment, advanced clinicians also take a systematic approach to evaluating their own clinical work. One common way of evaluating treatment progress is to use a single-case design to monitor the effectiveness of treatment (Barlow, Nock, & Hersen, 2009). At a basic level, empirically supported measures are utilized at pretreatment and posttreatment, whereas more advanced clinicians implement ongoing assessment methods throughout treatment. More importantly, expert practitioners use the data to evaluate progress, inform treatment decisions, and make modifications to the case conceptualization and treatment process.

12.7.5 Advanced Understanding of Client Characteristics and Context in Treatment for CSA

Client characteristics represent one component of the tripartite evidence-based practice model, and advanced clinicians are responsible for integrating and addressing individual characteristics to ensure clients receive the best possible services. Advanced clinicians are able to adjust procedures as needed to match the developmental level of the child. They also recognize family stressors that may impede treatment and, through a collaborative effort with everyone involved in the treatment process, adapt services to meet the needs of the client and their family. Experienced clinicians also actively seek out resources for clients/families, and establish contacts and professional relationships with community agencies in the area in which they practice. Additionally, expert clinicians more readily recognize cultural misunderstandings or distrust by the client/family and immediately address these issues to build rapport and increase treatment compliance. The incorporation of a diverse treatment

team may provide invaluable consultation for clinicians to gain additional perspective and knowledge of both the client's circumstances and cultural resources in the community. Ethnic minorities are a diverse group, and it is important that clinicians are flexible in their applications of recommendations because they likely do not apply to all members of the minority groups. Unfortunately, a detailed description of cultural considerations for each minority group is beyond the scope of this chapter (Fontes, 1995; Futa, Hsu, & Hansen, 2001). Expert clinicians are able to identify the role and importance of a number of issues that can be important for individuals across a variety of cultural groups, such as kinship bonds and extended family, religion and spirituality, willingness to seeking treatment for psychological issues, comfort in sharing problems and expressing emotions, views on sexuality and homosexuality, gender stereotypes, and respect for adults and authority (Fontes; Futa et al., 2001).

12.7.6 Contributing Expertise in Ethical and Legal Situations

Contrary to other competencies described in this chapter, being an ethical practitioner is not on a continuum. However, with years of practice comes an increased recognition of the gray areas associated with ethical dilemmas for which clinicians should seek consultation. While beginning clinicians may focus on understanding professional guidelines and laws regulating clinical services, more advanced clinicians have expertise that provide guidance in dealing with challenging ethical dilemmas and legal issues. In fact, more advanced and experienced clinicians could serve as resources or consultants for other professionals, thereby contributing back to the field in the form of professional service.

Advanced clinicians are able to serve as a valuable resource for families, providing them with information on what they can expect from the legal process, as well as addressing the impact the legal process may have on the youth and their family. It is not uncommon for sexually abused youth to be called to testify in front of their perpetrator. Not surprisingly, this experience may be frightening for the client and a natural response may be to avoid court proceedings altogether. Clinicians may conduct "court school," whereby children become acquainted with the courtroom and the judicial proceedings prior to testifying, which is often beneficial in reducing court-related distress.

More advanced, and forensically trained, clinicians in the area of CSA may frequently provide expert testimony in regards to the veracity of the abuse and the accuracy of the child's testimony (Mason, 1991; Sagatun, 1991). Advanced clinicians serving as expert witnesses should be well-versed with historical rulings (e.g., *Frye* v. *United States*, 1923; *Daubert* v. *Merrell Dow Pharmaceuticals, Inc.,* 1993; *Kumho Tire* et al. v. *Carmichael,* 1999), as well as standards for expert testimony in their jurisdictions. However, as previously noted, treating clinicians lacking a role in the forensic interview process should avoid testimony with regards to the veracity of abuse allegations (Mannarino & Cohen, 2001).

12.7.7 Addressing and Treating Risk of Harm to Self and/or Others

As noted above, sexually abused youth are at an increased risk for self-harm and suicidal ideation (Glassman et al., 2007; Nock & Kessler, 2006). Therefore, expert competencies in this area

go beyond simple risk recognition and assessment of self-harm behaviors, and focus on prevention and treatment. Advanced clinicians are readily able to recognize subtle cues of self-injury (e.g., visible scratches, long sleeves in warm weather). In addition, experts possess knowledge of how circumstances and responses associated with CSA relate to common contextual (e.g., loss of a relationship, social isolation) and emotional (e.g., sadness, shame, guilt) antecedents of self-harm. Further, advanced practitioners assess and address behaviors that place clients at increased risk for other safety and health concerns (e.g., promiscuity, unprotected sex). Expert clinicians should be able to provide consultation as well as valuable resources.

12.7.8 Working with Interdisciplinary Teams

Youth who experience CSA are likely to receive services from a wide variety of agencies, placing them at risk for fragmented care that may not address their overall needs. Advanced clinicians possess the ability to utilize both their knowledge and relationships with outside agencies to coordinate services in a systematic manner. Expert clinicians are able to provide service coordination at the case, program (e.g., involvement in clinical and policy decision making), and larger system levels (e.g., interagency structure and agreements). Multidisciplinary teams often incorporate professionals from the schools, Child Advocacy Centers, CPS, law enforcement, legal, and mental health agencies in order to coordinate services and address multiple areas of functioning. Advanced clinicians will likely be active members of multidisciplinary teams working to facilitate communication/services across providers and providing ongoing consultation to a variety of organizations. Advanced practitioners understand the role and function of each team member, including the shared and unique contributions of the other professionals.

Further, clinicians with expert competencies in CSA often serve as sources of information for other practitioners and professionals. Thus, expert-level clinicians are able to provide in-depth information on empirically supported research and treatment for CSA to a variety of professionals within their community, region, state, and possibly around the globe. Moreover, the continuous dissemination of CSA-related information (e.g., common symptomatology, heterogeneous emotional/behavioral responses, treatment programs, expert advice) will likely encourage collaborative efforts between agencies; thereby increasing the likelihood that sexually abused youth will receive the best services available.

12.8 Transition from Basic Competence to Expert

The transition from basic to expert competencies is a gradual developmental process that requires continuous (a) education and training, (b) experience, (c) supervision, and (d) self-assessment. Although basic and expert competencies have been presented separately in this chapter, clinical competency in CSA should be conceptualized along a continuum rather than dichotomous approaches. Through the process of ongoing training, experience, and self-evaluation, clinicians progress along the continuum to possess more advanced proficiencies in CSA competencies. In order to reach the level of expert competency, professionals must be able to efficiently and effectively integrate the competencies previously discussed.

Understandably, the development of more advanced CSA skills requires significant personal commitment, investment, and time.

12.8.1 Continued Education and Training

An understanding of historical literature can provide a foundational background to the beginning practitioner, but the active consumption of the rapidly advancing and expanding CSA literature is critical for advanced clinicians seeking to remain current with the field (e.g., current theories, prevalence rates, psychological outcomes, and the efficacy of different treatment options). Additionally, the beginning clinicians can enhance their current knowledge and therapeutic skills by actively seeking continued CSA-specific education and training. For instance, conferences and workshops specializing in maltreatment (e.g., the APSAC Annual Colloquium, the San Diego International Conference on Child and Family Maltreatment) provide valuable educational opportunities and instruction on conducting certain techniques (e.g., gradual exposure) from experts in the field.

In addition, professional organizations and research centers (e.g., APSAC; APA Division 37, Section on Child Maltreatment; National Child Traumatic Stress Network; National Crime Victims Research and Treatment Center) that address CSA are important sources of education and training available to clinicians looking to gain more advanced skills. Moreover, some organizations now provide online information and/or continuing education credits for clinicians completing online tutorials (e.g., http://tfcbt.musc.edu/). Practitioners striving to advance their CSA clinical competency will likely build a library of materials relevant to CSA such as journals, manuals, and measures. This allows more advanced clinicians to easily access relevant information, keep up to date on the current state of the field, and serve as helpful resources when providing consultation to beginning clinicians.

12.8.2 Continued Experience

In an EBP framework, continued experience with sexually abused youth and their families provides invaluable opportunities for clinicians to strengthen and refine their skills. With continued experience, clinicians are able to confidently address a variety of issues that may influence treatment effectiveness such as necessary modifications based on client characteristics (e.g., addressing "familismo" in Latino clients by incorporating extended family members into treatment) and potential barriers to treatment (e.g., transportation, financial concerns, lack of resources, social isolation).

12.8.3 Supervision and Consultation

Continuously seeking supervision and consultation from CSA experts is often critical to the transition from basic- to expert-level competencies. In fact, the APA (2002) Code of Ethics states that clinicians using new therapeutic techniques and providing services to populations with which they do not have expertise should seek supervision and consultation to ensure that

the client receives appropriate services. Supervision can provide support and guidance with case conceptualization, therapeutic techniques, and modifications to the treatment plan. While practitioners with increased expertise may require less direct supervision, even expert clinicians may benefit from ongoing consultation with colleagues to discuss treatment challenges and ethical issues (e.g., testifying as an expert witness).

12.8.4 Self-Assessment of Clinical Competencies Involved in Treating CSA

Arguably, nothing could be more critical in the transitioning process than the ongoing self-evaluation of your own clinical skills. Clinicians should monitor their clinical skills throughout their entire career in all realms, including rapport and therapeutic alliance, assessment and treatment techniques, and the implementation/modification of treatment plans. Self-assessment allows clinicians to identify weaknesses, which can be improved through continued education, experience, and supervision.

Clinicians working with CSA victims may experience secondary traumatic stress or compassion fatigue (Figley, 1995) and burnout (Azar, 2000). Self-assessment can be valuable for recognizing and acting on these problems. In these situations, it may be useful for professionals to decrease the number of CSA cases in their caseload, maintain a healthy balance between personal life and work, employ self-care strategies such as stress management, and seek peer support and supervision.

12.9   Summary

CSA significantly impacts many youth and their families. Effects of CSA vary considerably, and consequences may include internalizing (e.g., anxiety, depression, etc.) and externalizing (e.g., substance abuse, sexual behavior, etc.) problems. Posttraumatic stress disorder (PTSD) is the most commonly identified clinical syndrome. A substantial number of youth do not show measurable clinical symptoms, although problems may appear later in life for some youth. Nonoffending parents and siblings may also experience significant distress and need treatment as well. Given diversity of problems that may be present, assessments should be multi-method, multi-symptom, as well as multi-informant.

Intervention for CSA is complicated by heterogeneity of symptom presentation and the fact that many children are referred for services due to the sexual abuse experience, and not necessarily because of exhibiting clinical levels of emotional or behavioral symptoms. Caregivers may seek services for the CSA victim to address questions and concerns, and reduce the likelihood of negative consequences. Treatment for sexually abused youth commonly includes psychoeducation, anxiety management, exposure, cognitive coping, and social support. Behavior management strategies may be valuable for conduct and sexual behavior problems.

Basic-level competencies for clinicians working with CSA include the following inter-related skills: (a) using an evidence-based practice approach for treatment; (b) possessing fundamental scientific knowledge of CSA symptoms and treatment; (c) using fundamental case conceptualization skills; (d) building rapport and therapeutic alliance; (e) treatment planning; (f) monitoring treatment progress; (g) modifying treatments as needed; (h) understanding

the impact of developmental issues, diversity considerations, and life stressors and challenges in assessment and treatment; (i) evaluating and monitoring legal, ethical, and CPS concerns; (j) evaluating and monitoring risk of harm to self and/or others; (k) working in an interdisciplinary context; and (l) understanding the effects of medication on treatment for CSA.

Expert-level competencies, which build upon the foundational skills, include the following: (a) possessing advanced scientific knowledge of CSA symptoms and treatment; (b) using advanced case conceptualization skills; (c) using advanced rapport building and therapeutic alliance skills; (d) having expertise in planning, monitoring, and modifying treatment; (e) having advanced understanding of the impact of client characteristics and context; (f) contributing expertise in ethical and legal situations; (g) addressing and treating risk of harm to self and/or others; and (h) working with interdisciplinary teams. The transition from basic to expert competencies requires integration of different competencies and the development of more advanced clinical skills through additional education and training, experience, supervision, and self-assessment.

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13 Child Physical Abuse and Neglect

Lenore E. Walker

Abstract: Child abuse exists everywhere in the world, in all cultures and ethnic groups, resulting in huge economic and personal costs. Legal and health professionals have studied the causes and treatment methods to try to prevent and mitigate the harm done by abuse, especially from parents or other caregivers. This chapter provides the legal issues and definitions in physical abuse and neglect, maltreatment, and psychological abuse looking at the recent history and current laws. Information is given about the child protection system in the USA and other countries. Psychological theories of why parents abuse their children are discussed and the psychological harm such abuse has on their children using a developmental perspective and emphasizing the learned behavior from one generation to the next. Basic and special competencies needed by health professionals to work in this area are also described including psychological assessment of children and abusers. Standardized psychological tests and assessment inventories commonly used by psychologists are reviewed. Various psychotherapy interventions with children and parents are listed including offender-specific treatment for abusers, cognitive behavioral therapy, dialectic behavior therapy, family systems therapy, EMDR, and supportive therapy. Prevention strategies following a public health model of decreasing risks and strengthening resiliencies is discussed. Expert competencies are described for clinicians providing forensic evaluations and serving as expert witnesses. Numerous references are available for further information.

13.1 Overview

► *Jill lay on the floor of the playground appearing to be writhing in pain. She clutched her stomach and moaned from time to time. Her father was chasing after her little brother, Billie, who was trying to climb up the slide and did not pay much attention to her. The boy started screaming as his father pulled him up by the arm, leaving him dangling. It was summer and other bruises could be seen on the young boy by any casual observer. But observers did not think twice about what they saw given the high activity level of the child and the difficulty the well-dressed man seemed to be having in controlling his children. He seemed like any other father who had the responsibility of two young children. In fact, later one observer stated that she felt sorry for the father and wondered where the children's mother was. At no time did she even suspect that the father who had been granted shared parental responsibility of the two children whom he abused would eventually kill them and himself.*

Unfortunately, the above scene is becoming more familiar as courts are granting shared parental responsibility or joint custody when parents get divorced. As discussed later in this chapter, the standard for granting joint custody is not adequate in protecting children, especially when their father has also committed domestic violence against their mother (see www.theleadershipcouncil.org). Although protective mothers attempt to provide evidence to the family

court that their children are in danger from fathers who have not had any prior, major responsibility for child care, it often falls on deaf ears. Even worse yet, court-appointed mental health professionals with no competency in child abuse evaluations opine that these mothers are trying to keep their soon to be ex-husbands away from the children using a nonscientific theory, Parental Alienation Syndrome (PAS), proposed by Gardner (1992), to justify their recommendations to the court to not to give sole custody to fathers who are unprepared for the rigors of single parenting young children. Although most of these fathers do not kill their children or themselves, the damage done to children is apparent as they battle for control with these abusive parents.

Despite the efforts of the child protection system around the world, children are still being killed after physical assault and severe neglect from a parent or caretaker. Studies demonstrate that more males than females and more father's or mother's paramours are responsible for these fatalities from physical abuse and more mothers are responsible for those fatalities from severe neglect (US Advisory Board on Child Abuse and Neglect, 1995). This is usually because mothers spend more time with children and therefore have more opportunity to engage in maltreatment. In some cases, mothers are under the power and control of an abusive partner and unable to protect their children as well as themselves. The US National Child Abuse and Neglect Data System (NCANDS) statistics indicate that an estimated 1,530 children died from an injury resulting from child abuse or neglect in 2005, while over one quarter million reports of abuse were made. Other studies suggest that this represents less than one fifth of all the child fatalities due to poor reporting standards (Crume, DiGuiseppi, Byers, Sirotnak, & Garrett, 2002; Herman-Giddens et al., 1999). NCANDS data indicates that the highest risk for fatality is for children under 1 year of age (44.2% in 2006) and over three quarters (78% in 2006) are children under 4 years of age. Although most child fatalities come from injuries after repeated child abuse (22.4%) or such as in shaken-baby syndrome (Altimkier, 2008), or such us in shanken-beby syndrome (Altimkier, 2008), or severe maltreatment (41.1%), another 31.4% of fatalities were the result of multiple types of maltreatment (Child Welfare Information Gateway, www.childwelfare.gov/pubs/factsheets/fatality.cfm, downloaded April 23, 2008).

Why are these cases so difficult to identify? Neither physical and mental health professionals, nor legal professionals want to believe that well-dressed and well-spoken parents can inflict such serious harm to their own children. Although the statistics indicate that approximately 60% of those men who batter their intimate partner will also abuse their child, professionals are more willing to believe that it is not possible in the case in front of them. These cases are not identified easily by family court mental health professionals who make the assumption that the child custody guidelines from various professional associations deal with high conflict but not necessarily abusive families. Obviously, the rise in cases of domestic violence and family homicides proves them wrong. Although the USHHS Administration for Children and Families produces numerous materials to assist professionals in identification, most mental health professionals are unaware of them (http://www.dhs.state.il.us/page.aspx?item = 9262 retrieved June 2009).

▶ *The 3-year old child brought into the emergency room seemed lifeless to mental health professional who was assigned to the pediatric ER. He was so thin and appeared malnourished. His little belly was distended and his body had bruises of all different colors indicating different stages of healing. The standard protocol was to separate the mother from the child and interview her while the pediatrician was examining the child who barely moved as he was being touched. The mother sat there stunned, barely able to talk. She had gone to work and came home to find the child lying in his crib. She had*

asked a neighbor to watch him as no one else was available and she simply had to work or there would be no money to pay the rent or buy the child and her food. She believed the boy would stay asleep through the night like he usually did and all the neighbor had to do was look in on him every so often. How could she know that he would get up in the middle of the night and cry so hard that he was inconsolable. Life was difficult for them and she tried to do the best she could.

This is another familiar scene to those who work with children who are abused. Here the mother may have been negligent in not providing adequate child care while she went to work. Was she abusive? Did the child accidentally swallow something toxic or touch something that harmed him? Did the babysitter shake him because she could not get him to stop crying? Could this mother continue to care for her son if she had assistance from the local agency that provided Child Protective Services (CPS)? Could this have happened even if she had an expensive nanny in the house to care for him?

This scenario becomes even more common when the economy worsens. Child abuse authorities report a dramatic increase in cases of abuse and neglect especially in children with poor nutrition. Both mothers and fathers who have lost their jobs will be home spending more time with their children rather than keeping them in day care they no longer can afford. While there is no specific profile of an abuser, high-risk situations include stressful environmental situations and parental depression (US Advisory Board on Child Abuse and Neglect, 1995). Mental health professionals who work in hospitals see this scene repeated over and over despite their wish to believe that the concerned parent had not really caused the abuse to the child.

► *Shauna and Tyrone were 13 year old twins who were referred for a psychological evaluation by the court to assist in placement. Both children were currently in a foster home placed by the local state Child Protective Services Agency. They had been in and out of foster care for most of their lives as their mother was a known crack addict who was unable to care for them and their father, also a known polysubstance abuser, was in and out of prison. They have an 18-year-old brother who no longer is eligible for services and a 16-year-old sister who just had her first baby. Their records indicated the multiple types of abuse each of them had experienced throughout their lives. Although they were diagnosed with communication and language difficulties that impacted their learning in school and were already placed in special education programs, their behavior had taken a turn for the worse. Shauna was beginning to act out sexually with other boys her age and Tyrone was acting like a bully to the other children in the foster home. The court wanted to know what was happening with them that may have caused this recent behavior change.*

Shauna and Tyrone are from the typical type of family that most people think of when child abuse and neglect is discussed. Their parents were unavailable and they were in and out of the state foster care system due to abuse and neglect. Their learning problems were diagnosed and they were being given some remediation in school. Yet, they were not doing well and in fact, were actually deteriorating. The job of trying to tease out the cause of the current deterioration in their behavior is a challenge for any psychologist given the twins' extensive history of trauma and probable cocaine-exposure in utero during their mother's pregnancy. Stability in the foster home system is almost impossible for most of these children as other children are coming in and out of the homes even if they were able to be in one foster home for an extended period of time. Their developmental age must also be examined as entering into adolescence with the hormonal and other biological changes can add to the multi-determination of why they are in need of further

assistance especially since they are aware of their brother's problems supporting himself having aged-out of the system and their sister is repeating the generational cycle with no means of support for herself and her baby. What type of assessment and intervention will help these twins?

In this chapter, the requisite competencies that are needed by psychologists who work with children who are abused and neglected are explored. In particular, the history of the protection of children from child abuse and neglect and relevant laws and agencies is discussed as it is important for mental health professionals to understand their role in relation to others in the system. Although the theories of intervention that are most successful for working with abused children and their families have not been carefully evaluated, there are some that appear to be standard in the field and therefore are described here. Methods of assessment including the knowledge of the developmental issues as they interact with impact from child abuse and especially how they relate to risk and resiliency factors in families are presented. Where there are differences for children who have been neglected and maltreated and those who have also been physically abused, these differences are clarified. This is also true in the discussion on therapy and prevention strategies for mental health professionals. Finally, a section on training needs and continuing education for psychologists and other health care professionals concludes the chapter.

13.2 History

It may seem difficult to believe it, but the mandatory reporting of child abuse and neglect only began in the mid-1970s with pediatricians Henry Kempe (Kempe & Helfer, 1972; Kempe et al., 1962) at the University of Colorado and David Gil (1970) at Brandeis University each writing a book detailing their research results and found far more incidents of child abuse and neglect than had ever before been suspected. By the early 1970s, most states passed child abuse reporting laws and began to collect data of reported cases and the National Center on Child Abuse and Neglect (NCAN) and its statistics branch National Center on Child Abuse and Neglect Data System (NCANDS) were established within the executive branch of the US government at the Health and Human Services Department for Children and Families in 1974 with the *Child Abuse Prevention and Treatment Act (CAPTA) (PL-93–247)* that provided for uniform definition of the different forms of child maltreatment as described below (Hurt, 1975). By 2003, there were 2.9 million referrals regarding over 1 million children made to child protective services around the USA with approximately one third subsequently being substantiated. During that year 1,500 children reportedly died from child abuse or neglect. Most of the reports made to CPS agencies are for neglect rather than physical abuse. Reports that cannot be substantiated but still might be legitimate abuse are called "unfounded" and the rest are considered as not being reportable abuse (US Department of Health and Human Services [USDHHS], 2005). Psychologists and other mental health professionals are asked to work closely with the judicial and executive branches of government in order to properly assess and treat many of these children and their families.

Interestingly, child abuse and neglect is treated as a serious problem all over the world although there are cross-cultural differences in definitions of abuse and neglect that are most likely related to the amount of resources a particular country can provide to children in general as well as when identified as at-risk (Bottoms & Goodman, 1996; Corcorcan & Chaudry, 1997; Evans-Campbell, 2008). The Convention on the Rights of the Child (CRC) was developed by

the United Nations over a 10-year period to protect the human rights of the child by banning discrimination against children and affirming special protection and rights appropriate to minors. Specifically, children have the right to survival, develop to their fullest, be protected from harm including abuse and exploitation, and participate fully in family, cultural, and social life. Guidelines also govern health care, education, legal, civil, and social services. All member nations have signed the document except for the USA and Somalia (UNICEF, 1989; UNICEF, 2004). The USA claims it will ratify the document as soon as it determines it is not in conflict with any of the myriad of laws that impact on children (McCauley & Schwartz, 2007).

Today, mental health professionals are all trained to know that they are in a mandatory report category requiring them to make a report upon suspicion of child abuse to the appropriate state authority. They must inform clients that their privilege of confidentiality does not extend to disclosures of child abuse. The only other area that permits a breach of confidentiality in therapy is if clients give indications they will hurt themselves or someone else. Failure to report child abuse can cause disciplinary actions and even criminal charges in some states.

The goal is for the state to protect children, but the system is so overloaded with cases that identification and provision of limited services do not often provide the necessary protection. At the same time, if a mental health professional makes the mandatory report, many families drop out of treatment, as they no longer trust the professional to be helpful to them. However, most states do not permit the psychologist to make this determination. Further, the legal standards for state intervention in the family demand a high evidentiary burden for the state to meet leaving the child with no treatment and no protection from the state. Even if the state does take control of the child and prepares a reunification plan for the parent(s) to complete, services to both the child and the parent(s) are often inadequate or nonexistent. If the child is removed from the home and placed in the foster care system, other problems are rampant such as abuse in the foster home, lack of attachment to adult caretakers, and adjustment to new schools, friends, and quasi-family members. If a child custody dispute is also taking place at the same time, an abused child refusing to see the abusive parent may be forced into a reunification plan that does not provide for psychological or physical safety but rather, shared parental responsibility, the new name for "joint custody" in most states.

13.2.1 Legal Issues and Definitions

The legal standard for family court matters calls for "the best interests of the child" as the way to make decisions impacting on the child's life (Child Abuse Prevention & Treatment Act, 1974, 1999). However, there are few legal definitions of what that means and those that do exist do not take into account the psychological development of the child. One of the major problems is that children do not have legal standing in the US courts and cannot be represented by a lawyer who looks out for what they want and not just their best interests. Rather, they can and often do have a Guardian ad Litem (GAL) appointed to represent their "best interests," but again, the definition of what exactly that means is often vague and difficult to assess. In Florida, for example, children are permitted to have legal representation in two situations: (1) if they are about to be sent to a residential placement and (2) if their parent's legal parental rights are about to be terminated. Cases like these often demonstrate the extreme differences between what is thought to be in a child's best interests by the GAL and what the child really wants and may actually need. Laws in other countries, such as Australia and Israel, have been changed to

permit a child's own legal standing in the court, which is especially useful for older children and adolescents. Children's own legal standing seems to be encouraged by the CRC document explained above.

For example, in the case of *Gregory K* (Russ, 1993), a 12-year-old child who was in and out of the foster care system for most of his life wanted to be adopted by his foster parents who also wanted to adopt him. However, the state CPS system insisted that he was not eligible for adoption because his parents were still working on their treatment plan and, therefore, could not be forced to have their parental rights terminated. Initially, the court concurred with Gregory and his foster parents who wanted to adopt him. The appellate court then ruled that this was not possible due to the presumption of reunification in the state laws and overturned the decision. However, had the court been legally able to take Gregory's wishes into consideration and not just his parents' or the CPS rules, the adoption could have taken place. For Gregory, it would have meant a lot to have a real family. He had never been able to live with his parents for more than a short time due to their problems. But, without legal standing, the court was unable to take his wishes into consideration. These types of legal restrictions often put the mental health professional in conflict with the requirements of the law and make it difficult to protect the child (Kalichman, 1993; Russ; Silver, 1967).

This also occurs in child custody cases, especially when children have made allegations of physical or sexual abuse of one parent towards them. These types of allegations are extremely difficult to prove especially since courts do not have to listen to the children themselves. To perform a custody evaluation, many cases are referred to mental health professionals who are not trained in the assessment of child abuse or even domestic violence between parents, which frightens some children into not wanting to spend time with their abusive parent. However, the presumption in the law is that shared parental responsibility is in the best interests of the child even though there is no empirical research to support such a presumption in all cases. So these children are forced into contact with the parent he or she has accused of abuse, often without any protection, causing the child major psychological and sometimes physical harm. This occurs most frequently when the allegedly abusive parent does not fit the stereotype of a child abuser (Walker, 2009).

The second area in addition to NCAN where definitions of child abuse and neglect can be found are in the International Society for the Prevention of Child Abuse and Neglect (ISPCAN) where research has been done throughout the world to behaviorally define abuse and neglect (ISPCAN, 2004). Although most countries define child physical abuse as any nonaccidental injuries inflicted upon the child or placing the child in harm such as allowing children to live on the streets or be forced into prostitution, the definition of neglect may have more differences based on regional, cultural, and religious values. McCauley and Schwartz (2007) suggest that more developed countries with resources for services for children may have broader definitions of neglect than those countries with fewer availability of services.

In 1974, in the original CAPTA law, child abuse and neglect was defined in broad terms that described injuries to the child and harm to their welfare. Over the years the definitions have been clarified and in 1996, the US Congress changed the definitions to:

► (T)he term "child abuse and neglect" means, at a minimum, any recent act or failure to act on the part of a parent or caretaker, which results in death, serious physical or emotional harm, sexual abuse or exploitation, or an act or failure to act which presents an imminent risk of serious harm (42 U.S.C. p 5206g(2)(1999)).

13.2.2 Characteristics of Abusive Parents

Although there has been a great deal of research on characteristics of abusive parents, in fact, most modern research suggest that it is a combination of high-risk situations including high-risk child characteristics that mix together with parents at a high risk to abuse. Kempe & Helfer (1972) suggest that these three variables are needed: parent + child + situation = abuse and/or neglect. Delsordo (1963) proposed that there are five categories of abusers: (1) mentally ill, (2) overflow abuse (unable to cope and abuse others also when under stress), (3) batter child because seen as a competitor or special burden, (4) disciplinary abuse relying on physical punishment, and (5) misplaced abuse by someone who is angry, in general.

The mentally ill abusive mother often confuses the child with herself as she is unable to differentiate and separate. This mother is at high risk for committing child abuse and filicide especially if she has developed postpartum depression (McKee, 2006). High publicity cases such as Andrea Yates who drowned her five children often leave the impression that this occurs more frequently than it actually does. Statistics indicate that fewer than 1,500 children per year are killed by both mothers and fathers with the largest percent being father's and mother's paramours killing children during attempts to discipline them (US Advisory Board on Child Abuse & Neglect, 1995).

Holter and Friedman (1968) found that parents of abused children were impulsive, dependent, immature, impulsive, rigid, self-centered, and rejecting. Others have found parents of abused children are predominantly from a lower socioeconomic group and have less knowledge about developmental skills of children (Gregg & Elmer, 1969) and have personality inadequacies, impulsive behavior, and display sadistic aggression (Bennie & Sclare, 1969). These parents are said to have few "mothering skills" so their expectations of what a child can do is at odds with the child's actual developmental level.

Today, most agree that these early suggested characteristics of abusive parents are not conclusive by themselves. Rather, like domestic violence and elder abuse, child abuse is multidetermined and other factors such as environmental stress and the caretaker parent's substance abuse are more likely to raise the potential of abuse in high-risk families. Newberger (1973) was among the first researchers to study the contribution of characteristics of children who were at high risk to be abused in addition to the abuser's characteristics. Early on it was found that one of the highest risks for abuse are infants who are prematurely born, probably because of the extra special care they need to survive. The same is true for children with disabilities. Terr (1970), who has been studying the impact of trauma on children, found that abused children often retaliate against parents with behavior that will definitely bring them more abuse, but also relieves some of their feelings of powerlessness by waging a full-scale counterattack. Some examples include children who refuse to eat, those who deliberately tell others lies about what is going on in their family, those who violate norms like defecating in a public place or breaking a parent's possessions, and those who demonstrate direct anger in the parent's face. Others have looked at the mismatch of temperaments between parents and child which may cause sufficient daily stress in caring for them. An example is the easy-going parent with a hyperactive child or the opposite. For some parents, certain behaviors at a particular developmental stage may present a challenge that is seen as provocative, although Gregg and Elmer (1969) found that this was more often associated with bonafide accidents that harm children.

Situational factors that raise the stress level in a family also produce higher risk for child abuse. These factors include social, economic, and psychological issues. Living in poverty has

been found to be one of the more important contributory factors over time (Brooks-Gunn & Duncan, 1997). The sharp decline in the family's living economic living conditions, such as that which occurs when a parent loses his or her job, also may cause severe stress that makes it difficult to properly parent a child. Studies have found that a parent who is depressed has a high risk of neglecting the needs of a child. Homes in which children are exposed to domestic violence not only raise the risk of child abuse (some studies have found a 40–60% overlap) but also may raise the risk that boys will be more likely to use violence in their own homes when they are adults (Walker, 2009). Alcohol and other drug abuse also make it difficult to adequately parent children and in homes where family money goes to support the parent's drug habit rather than food for the children, neglect is often the result. Although these situations do place children at higher risk for being abused or neglected, in fact, most researchers today believe that for abuse to actually occur, it is necessary for there to be the potential for the parent to be abusive together with a special kind of child and a crisis or series of crises in the family.

Not all parents who have situational crises and have the potential to be child abusers actually do use abuse. Research has found protective factors that give clues to what types of interventions might help provide safety for children. Some of these protective factors include supportive family and friends, ability to ask for and utilize help, a supportive spouse/partner, and an affinity for the child. Some studies have found that only one child in a family with other children are abused suggesting that the parent–child bond is not well established. The presence of a step-parent in the home may also be a trigger for abuse of a particular child or in some cases, all the children in the home including his or her biological children. Domestic violence perpetrators are more likely to abuse more than one child as has been found with fathers who sexually abuse children. Many of them have outward appearances of being a stable community member often volunteering for leadership positions that successfully hide their abuse in the home to outsiders. These families have very tight borders where very little interaction takes place that the father does not control and the children as well as their mothers are frightened into silence. It is typically physical or physiological symptoms that expose them or the abuse is revealed during the pendency of a divorce.

13.3 Psychological Theories of Child Abuse

13.3.1 Theories About Abusers

The early researchers and clinicians who published in the area of child abuse and neglect were mostly reporting what they observed without much theory to help better understand either the abuser or the abused child. As more children were reported to the NCAN register, patterns were analyzed, still without much theory to hold them together. Some of the earliest attempts at theory about why abusers acted as they did included psychoanalytic premises that placed blame on mothers for loving their children too little or too much. Overpossessive and overbearing mothers, schizophrenic-genic mothers, narcissistic, rejecting, and frigid mothers who used their daughters to substitute for themselves all appeared in the literature. Alcoholic mothers who were inconsistent in the attention paid to their children were also blamed for their children's problems.

Despite the inaccurate portrayal of mothers, the psychodynamic theories did provide information about the difficulty in all interpersonal relationships that appeared to be common in some types of abusers. Some of those theories are still useful in cases where mothers with

postpartum depression kill their infants or in those who are unable to form attachments to others to help them care for their children.

However, by the time the 1980s were over, the women's movement attempted to take the blame for child abuse away from the mother using the supportive statistics that demonstrated the violence that father's used against children (Chesler, 1991, 1972). The research about the impact of trauma on children and women also helped put many of the psychoanalytic theories to rest as rarely relevant in understanding why abuse occurred or how to rehabilitate the various family members. New data about nonoffending mothers began to demonstrate the strong relationship between the different forms of violence in the family and trauma theories seemed to be a more useful way to conceptualize some forms of child abuse especially when domestic violence was also present (APA, 1996a). The analysis included some understanding of mothers who were under pressure from controlling husbands to discipline children or ignore children and therefore, in their attempt to protect children from an abusive father, over- or under-disciplined them (Walker, 2009). Boundary violations are often commonly seen in domestic violence families which may also account for the high risk of other forms of violence in addition to intimate partner abuse.

Neglect of a child may also be multi-determined as was illustrated in the earlier case vignettes. More mothers are accused of neglecting children than fathers but that may be an artifact of how much time mothers spend together with children as compared to fathers. It also may be due to external circumstances that perpetuate neglect such as poverty (Corcorcan & Chaudry, 1997) lack of education, religious beliefs that prevent seeking necessary medical attention, and coercion from fathers who also commit domestic violence (Johnston & Roseby, 1977; Jones, Finkelhor, & Halter, 2007; Peterson, 1994; Peterson & Brown, 1994; Polaha et al., 2004). Stress theories proposed by Lazarus et al. attempt to account for the situational impact that influences abusive behavior in parents (Lazarus & Folkman, 1984). Speilberger et al. have examined the impact of stress on state and trait anger in cross-cultural studies (Speilberger, Sarason, Kules, & Van Heck, 1991).

Theories abound about why men use violence in their relationships but most agree that although violence is multi-determined, it continues to be used for power and control in relationships as violence works to get what the abuser wants immediately and no one is able to stop them (APA, 1996a). Straus has linked child abuse and domestic violence together finding that the overlap between men who abuse women and those who abuse children may be as high as 60% (Straus & Gelles, 1990). Gil (1970) was one of the first professionals to suggest that there is a generational transmission of violence from father to son which is supported by the Straus and Gelles model from their data. Stark (2007) proposed that application of a learning theory model to the experiences of those who live with family violence presents the best fit for understanding why men use violence. Further, Stark describes how ongoing patterns of coercive control link various acts of family violence together. Bancroft (2002) takes these theories further and applies it to understanding the minds of angry and controlling men and how it impacts on their parenting within the family (Bancroft & Silverman, 2002). Interestingly, Kalmuss (1984) extrapolated from the original Straus data and found that boys who were exposed to their fathers' abuse of their mothers were 700 times more likely to use violence in their own lives and if they also were abused, the risk factor rose to 1,000 times the nonabused child. Given the high numbers of children at risk for exposure to domestic violence every year, estimated at 10–20% of all American children (Carlson, 2000), and the propensity of the family courts to enforce shared parental custody despite reports of family abuse, it is important to understand the modeling of children who are exposed to violence and coercive control in their families.

Family systems theories also have been used to explain child abuse and how to change the dynamics so as to better protect children. While most theorists today believe that family systems theories should not be utilized when there is domestic violence, this admonition does not hold for child abuse. Gil (1996), for example, provides a treatment plan based upon the systemic view that the family itself has a relational disorder and only treatment with all members can make each of them whole again. Kaslow (1996) and other psychology colleagues who work with families rather than individuals have proposed a new diagnostic category of relational disorders to account for dysfunctional family patterns reportedly being considered by the DSM-V work groups.

13.3.2 Theories About Impact of Abuse on Children

Child abuse and neglect has been seen as the cause of most of the problems in childhood. For example, the high rate of abuse and neglect in children in the foster care system or charged with delinquency is often blamed for children's bad behavior (Rapp-Paglicci & Loeber, 2007).

Pathways from child abuse victim to juvenile delinquent are theorized using a social-control, social-learning model suggesting that children learn behaviors and attitudes towards violence at an early age, usually at home, and then find like-minded individuals and groups to associate with who influence them to act aggressively without concern for consequences. Others suggest that the severity and frequency of the abuse experienced in the family will have a greater impact on the future behavior of the child. In research from battered women, it has been suggested that children who are unable to form attachments to either one or both parents or to society in general are also at high risk of antisocial and sometimes violent behavior (Walker, 2009). Still others suggest that children with oppositional and conduct disorders have a higher risk of developing antisocial disorders including psychopathy, yet there are still others who believe that psychopaths have brain chemistry disorders that may also be genetically influenced (Hare, 1996). However, although the exact balance of prosocial and negative influences on a child's life in order to choose one or the other is not known, it is thought to often depend upon the interaction of the child's situation and the influence of both family and peers (Rapp-Paglicci & Loeber, 2007).

Garbarino has contributed important psychological understanding to the issue of impact of child abuse and neglect on boys (1999) and girls (2002). His findings also support a learning theory model of behavior although his most recent work has provided more suggestions and less blame for parents of aggressive children (Garbarino, 2003, 2006; Garbarino & Bedard, 2002). Newberger (2000) a pediatrician who devoted his career to helping abused children also has theorized that the socialization of boys promotes more violent behavior than in girls. This theory is also subscribed to by psychologists including Pollack (1998) and like Garbarino, psychiatrists Prothrow-Stith and Spivak (2005) indicate concerns about the rising amount of violent behavior in adolescent girls. The APA Task Force on Violence and Youth (1993) however found that the process called "maturing-out" may also account for the reduction of aggressive and violent behavior throughout the lifetime of an adolescent whose brain has not yet matured sufficiently to control impulsive behavior.

A concise empirically based theory of the transmission of violence from father to son was developed by Patterson (1982) in his studies of aggressive boys. Patterson and his colleagues went into the homes of these aggressive boys, aged 9–11 years old, and observed their behaviors

with their parents. Interestingly, he found that cross-gender aggressive behaviors were often found in these families with fathers and sons demonstrating coercive behaviors to mothers and daughters. In addition, he found that the coercive behaviors occurred in a pattern that is similar to the cycle of violence found in studies of domestic violence families (Walker, 2009). That is to say, there were clusters of aggressive behaviors followed by clusters of positive behaviors, in what Patterson called "haining and fogging" behaviors which prevented the recipient of these behaviors from making appropriate responses. Stark's (2007) work on coercive control in the domestic violence family supports Patterson's earlier results with aggressive boy's families. Typically, observations in normal families find more positive than negative interactions between family members. In dysfunctional families which do not have aggressive children, Patterson found more negative than positive behaviors towards each other, but they were more equally distributed across all family members. Thus, a careful analysis of coercion among family members may give important clues to whether or not a family may be engaging in abusive behaviors even without direct observation.

Research on trauma theory may provide the link between biological, situational, and psychological theories about impact from, and transmission of, physical child abuse and neglect.

Charney, Deutch, Krystal, Southwick, and Davis (1993) studying the neurotransmitters and hormones associated with posttraumatic stress disorder (PTSD) have found changes in the elevations of adrenalin and norepiniphrine that are responsible for increases in blood flow and heart rate. This may also be associated with panic attacks. The typical "fight" or "flight" response known to occur in trauma reactions are also mediated by the cortisol releasing factor (CRF) which prepares the organism to deal with perceived danger. The body uses the flow of glucocorticoids to deal with the pain from physical attack along with the endorphins that are opiates that the brain also releases. Cognitive memory may also be interfered with as the frontal cortex responds to the higher levels of dopamine that also stimulates thought processes and perhaps assists the intrusive memories of the trauma in the midbrain area that are then reexperienced with or without associations to parts of the trauma event.

In repeated traumas such as child abuse, parts of prior abusive events get reexperienced each time a new one occurs. While most of the studies of psychoneuroimmunology (PNI) have been on adults, Goleman (1996) and others suggest that structure as well as function of the child's nervous system that is still in the process of developing may be damaged by trauma. Although children's cognitive areas have been studied more than their emotional areas of the brain, there are those who believe that the most critical area impacted by trauma is in the midbrain area that controls the autonomic nervous system and its emotions, leaving the child's ability for social interaction and feelings of empathy for others damaged (Stahl, 2000).

13.4 Basic Competencies

13.4.1 Psychological Assessment

It is important for mental health professionals who work in the specialized area of child abuse and neglect to understand assessment methods that are appropriate for various developmental ages and abilities of the children, and other members of the family. Often physical signs of child abuse make assessment easier when there is a question of whether or not abuse has occurred.

Neglect and other forms of maltreatment are more difficult to assess as most mental health professionals are not trained to perform forensic evaluations. It is often critical to make sure that assessments do not compromise the legal issues involved. For children this means interviews and questions around the allegations of abuse and neglect must be done in an open-ended manner so that there is no danger of the evaluator biasing the child's information. The most benign interviews may create a bias by causing the child to give erroneous information that he or she thinks will please the interviewer. Sometimes when such bias is created it is difficult for the child not to continue repeating it, especially if the reaction of the adults is positive. On the other hand, it is also common for children to recant the information they have given about abuse once they realize that they are getting a parent or other adult they may also love in trouble.

Over the past 20 years, there has been a great deal of controversy over the stability of children's memory of abuse (Loftus, 1993). The American Psychological Association appointed a task force composed of clinicians and cognitive researchers to study the controversy and attempt to come to a reconciliation of their differences. They were unable to do so and wrote two separate reports explaining that the clinician's experiences with the clients who both remember and forget memories of child abuse were not consistent with what the knowledge from the research about cognitive memories would support. However, this debate spurred further research into the emotional experience of trauma and the storage of these memories, often nonverbal, in the hippocampus area of the brain, which helped explain the difficulty in consistent retrieval and storage into the cognitive memory areas (APA, 1996b).

13.4.1.1 Children

Assessment of children who are allegedly abused is complex as it is important to learn about the child's biopsychosocial development as well as current functioning without creating bias as described above (Briere, Berliner, Buckley, Jenny, & Reid, 1996). The biological integrity of the child may be inferred by studying the developmental milestones such as walking, talking, and cognitive abilities displayed in school or other settings. This information may come from interviews of family members, teachers and other school personnel, doctors, and others in the child's life. The same people may also assist in understanding the child's social environment. Children with disabilities are known to be at a high risk of child abuse and neglect (APA, 1993, 1996a). It is incumbent upon the evaluator to understand the impact of violence in the media and violence in the community on youth as well as other societal conditions. Exposure to weapons, alcohol, and other drugs, and prior violence all are high risk of both future victimization as well as violent behavior on the part of the child (APA, 1993, 1996a).

The psychological integrity of the child is assessed through clinical interviews, observations, and standardized tests where appropriate. Cognitive, emotional, and behavioral issues should be assessed and compared to age-mate and developmental expectations. Often abused and neglected children display both physical and psychological symptoms that should be part of the evaluation as it may help identify abusive experiences, especially in young children with difficulty in verbal reports. For example, children with physiological symptoms that indicate anxiety such as hair loss, headaches, stomachaches, vaginitis, frequent physical illnesses, and unexplained bruises may all come from abuse and neglect although these symptoms may also come from other reasons (Danese, Pariante, Caspi, Taylor, & Poulton, 2007; Kendall-Tackett,

2008). In particular, Kendall-Tackett has proposed that the immunological system of an abused child is compromised resulting in a variety of physical illnesses.

The American Professional Society on the Abuse of Children (APSAC) provides guidelines that assist in developing a protocol to question children at various ages (Briere et al., 1996) as does the Society for Research on Child Development (SRCD) (Steward et al., 1996). APA (*www.apa.org*) provides guidelines that can assist in understanding the process of the clinical and forensic evaluation of children as well as record keeping and ethical standards. These guidelines may be helpful both in preparing for an evaluation as well as through the entire process. Clinical interviewing may be unstructured or structured depending on the information needed to develop either a treatment plan or for legal purposes as discussed below. Greenspan (2003) provides a developmental framework within which to evaluate the information gained from the clinical interview. He emphasizes the need to understand the content of the child's statements during the interview through both developmental and clinical knowledge of the hypotheses set up before and during the examination.

Others also provide protocols that assist in obtaining information especially those that are frequently used in child custody evaluations such as the *Child Behavior Checklist for Children* (Achenbach & Edelbrock, 1983) which has forms for parents, teachers, and other caretakers as well as adolescent children to complete. Comparisons can be made for each person who completes a form per child using the child behavior and emotion profile that can be obtained from the scoring program recommended. Cognitive testing is usually done using the *Weschler Intelligence Scale for Children (WISC-IV)* although young children often perform better on the *Stanford-Binet* test because there are less failures until their age level is reached. Subjective as well as objective personality testing can also be utilized for children, most of which are available through various test companies such as *Personality Assessment Resources, Pearson, and Western Psychological Services* to name a few. Children's drawings and interview props such as stuffed animals, dolls, sandtray figures, cars, and the like are often used diagnostically as well as in play therapy, especially for those who have difficulty verbalizing their feelings about what happened to them (Bottoms & Goodman, 1996; Gitlin-Weiner, Sandgrund, & Schaefer, 2000).

One of the major areas to assess in children who have been abused and neglected is whether or not they have developed PTSD or other psychological diagnoses from the abuse. Sometimes the presence of these symptoms can assist in determining whether or not the abuse or neglect actually occurred in children unable to give a good verbal history. Even when the children do not meet the entire criteria for childhood PTSD assessment may be helpful to develop a trauma treatment plan. There are standardized tests that can assist in making the diagnosis of PTSD including the *Trauma Symptom Checklist for Children* (Briere & Scott, 2007) that has a version with and without allegations of sexual abuse for children 8 years old to 16 and the *Trauma Symptom Youth Checklist* (Briere & Scott, 2007) for parents to complete for children younger than 8 years. Interestingly, in research with adolescent girls who were being held in a youth detention center for either delinquency or status charges, it was found that although they denied any overt child abuse, 85% had significant scores on the Trauma Symptom Inventory (TSI) and Trauma Symptom Checklist for Children (TSCC) administered (Walker, 2009).

Many of the childhood signs and symptoms of PTSD are similar to those seen in children with attention deficit disorders and major depressive disorders. Therefore, it is important to be able to assess children through a developmental and clinical model as the signs and symptoms of PTSD change as the child gets older. Briere and Scott (2007) provide a comprehensive review

of PTSD signs and symptoms, evaluation methods and treatment of trauma for both adults and children. As children move into adolescence, it is important to assess for possible substance abuse given that the use of alcohol and other drugs is a popular way to self-medicate mental health symptoms.

13.4.1.2 Assessment of Parents and Others Suspected of Abuse

It is important to understand that the protection of the legal rights of those accused of child abuse or neglect is paramount in the manner in which they are questioned by nonlegal professionals. They may be charged with a criminal act as well as a civil dependency court charge, either or both of which can mean major losses and changes in their lives. They have much to lose and therefore it is critical to be aware of the need for informed consent to proceed with questions about the abuse or neglect allegations. On the other hand, it is often important to be able to conduct a clinical forensic assessment of the mental state of the alleged perpetrators to assist the court or for treatment planning purposes if the perpetrator had admitted to the charges.

Psychological interviewing gathering a detailed psychosocial history and abuse history is usually the initial step when performing a psychological evaluation for treatment planning. If the assessment is done from a family systems perspective, then genograms and other systems assessment tools may be used by the clinician. Whether or not a family systems approach is utilized, it is important to learn as much information about the person's family background especially since child abuse is known to be passed down from one generation to the next. Gold (2000) has delineated a number of areas to assess as it is known that family support can increase or decrease the psychological impact from child abuse. Assessing for strengths as well as deficits is recommended. Neuropsychological screening and other neurological tests may be needed depending upon information gained about possible head injuries or other similar nervous system factors including simple saliva testing of the cortical releasing factor when PTSD is thought to be present.

If the evaluation is for forensic purposes, then a complete battery of psychological tests are usually administered to assess for cognitive, emotional, and behavioral functioning of the individuals involved. Cognitive testing may be helpful in understanding lapses of good judgment when emotions are not well regulated. The *Weschler Adult Intelligence Scale* (*WAIS-IV*) is currently the most popular standardized psychological test used by psychologists. If the parent is being held in a detention center where time for evaluations is limited, the abbreviated version (*WASI*) may also be used. The most often used standardized personality tests are the *Minnesota Multiphasic Personality Inventory* (MMPI-2), the *Personality Assessment Inventory* (PAI), and in some cases where personality disorders may be suspected, the *Millon Clinical Multiaxial Inventory* (MCMI-3). As with children, it is important to assess adults for trauma symptoms and standardized tests by Briere (1995), Myers et al. (2002) such as the *Trauma Symptom Inventory* (TSI) and the *Detailed Assessment of Posttraumatic Stress* (DAPS). Assessment for substance abuse is also appropriate when performing both clinical and forensic evaluations.

Risk assessment to determine the likelihood of further violence has been a recent development. Most of the assessment instruments are actuarials which measure an individual against what is known about violence recidivism. Although the adage that the best predictor of future violence is past violence still has some truth, the MacArthur Foundation studies have identified other factors that contribute to the probability of further violence. These include static

variables such as the age at the time of the commission of the first violent act, family status, types of violence exposure; biological variables such as neurological signs and symptoms; psychological variables such as severe mental illness diagnosis and psychopathy and for some of the available assessment instruments such as the *HCR-20*, any treatment that the individual received. The *Hare PCL-R* is being used more frequently with accused perpetrators to attempt to assess for psychopathic behavior and antisocial personality disorder traits. The *Child Abuse Potential* test is also utilized with suspected abusive parents although these norms have not yet been standardized and are based mostly on mothers rather than fathers. There are several assessment instruments in the beta testing stage specific for danger from domestic violence and child abuse, but only the *Spousal Assault Risk Assessment* (SARA), which is really a protocol for the risk assessment, is in use at this time.

13.4.2 Psychological Interventions and Psychotherapy

Interventions and psychotherapy for victims and perpetrators of family violence need special training and expertise in trauma. Effective intervention programs are said to share two specific characteristics: (1) they draw on the understanding of developmental and sociocultural risk factors leading to antisocial behavior and (2) they use theory-based intervention strategies that are based on outcome evidence that they are effective in changing behavior (APA, 1993).

Although for most clinicians, their theoretical orientation will inform their conceptualization of a case and their treatment plans and techniques, most will need to add certain trauma-specific methods to their treatment. This will include reduction of anxiety and avoidance symptoms together with teaching emotional re-regulation and control over intrusive reexperiencing of the traumatic abuse events. However, prior to any treatment it is of critical importance to make sure that the clients are safe from further abuse. Often creating a safety plan with the adults or even older children helps prevent further abuse. Safety from being overwhelmed by their own internal thoughts, feelings, and behavior is as important as safety from another person's abuse or exploitation. Although it is not completely understood, the research shows that abuse victims are vulnerable to more victimization, perhaps because their resiliency is compromised (Walker, 2009). This risk is similar to children who are vulnerable due to other disabilities. Risk assessment methods as described above may be helpful.

13.4.2.1 Abused Children

Child psychotherapy. It is one of the most often recommended interventions for children who have been abused or neglected. Therapy needs to be tailored to the child's developmental age and wishes. Often there are differences in gender with boys more likely to engage in play that gives them a chance to talk and girls being more receptive to verbal psychotherapy. Veltkamp and Miller (1994) provide succinct behaviors that help identify abused and neglected children. These are helpful to know what areas need improvement through psychotherapy.

Successful intervention programs for children should begin as soon as possible upon discovery of the abuse to interrupt the impact from the violence. The psychotherapy should directly address any aggressive or other antisocial behavior on the part of the child especially paying attention to all the areas of the child's life that reinforces such behavior. Treatment also

needs to take advantage of what are called "windows of opportunity" that may naturally occur as transition periods in the child's life or are created by consultation with important others in the child's life. Programs that help children move into adolescence are particularly helpful in building resilience in youth and helping them make good choices that will impact on their later lives (APA, 1993). Although various techniques such as CBT and DBT are discussed below, many child therapists believe that it is the relationship between the child and the therapist that helps these children model good attachment and interpersonal skills.

Play therapy. This utilizes various forms of play and is particularly useful for young children or those older children who have difficulty expressing themselves with language. Gitlin-Weiner et al. (2000) and O'Connor (2000) have provided a variety of treatment approaches to play therapy depending upon the child's age, cultural background, and development. Sand-tray play with various figures and other materials can also be therapeutic for both children and adults who have been abused. Drawings and other forms of art therapy, music therapy, and movement therapy are also adjuncts to play therapy and have a similar effect on children to help them relax, become desensitized to abuse triggers, less angry, and rebuild interpersonal relationships in the family and with peers.

Eye Movement Desensitization Reprocessing (EMDR). It is an adjunctive therapy that has a good deal of research demonstrating its effectiveness with children and adults. A tapping procedure is often used once trauma triggers are identified so that the intensity of the child's reaction to the reexperienced memories of trauma is reduced and often eliminated (Greenwald, 1998). The therapist is expected to help the child remember details that may have been discussed in the assessment phase and utilize the EMDR technique to reduce the psychological impact that these memories have on the child's functioning.

Trauma-Specific Treatment. This treatment for children is similar to trauma treatment for adults exposed to abuse although the issues to be dealt with need to be age-appropriate to children. Identification of trauma triggers as suggested by Briere and Scott (2007) and assistance in stripping them of their power to control the child's emotional response directly is an important addition to psychotherapy with abused and neglected children. Relaxation training and desensitization methods are then used to help the child stop responding to the trauma trigger and gain better control over their intrusive memories. Some Dialectical Behavioral Therapy techniques such as mindfulness where the child is trained to concentrate on the present may assist in this area (Hayes, Follette, & Linehan, 2003).

Treatment for Bullying Behavior. It is another specific area of focus as the damage to children who have been victims and sometimes also aggressors of bullying behavior has been found to be significant in development of antisocial traits. Espelage (2003) describes the link between bullying and school violence which is another reason for the addition of this treatment area for child abuse experts. She suggests that bullying behavior occurs on a continuum and will be reduced by getting the community to come to an agreed upon definition of what it consists of and what will and will not be tolerated. Thus, bullies who are identified by peers or teachers may also be victims of other violence toward them. CBT and family systems therapy are both suggested as effective ways to intervene.

13.4.2.2 Adults in the Child's Family

Providing psychotherapy for different members of the family where abuse has occurred calls for a focus on the individual and where he or she fits into the family system. The family member's

treatment of the child must also receive focus during treatment. At the same time, it is important to respect the legal rights of abusers who may not admit to the abuse because of legal reasons. Obviously this is not a major issue when the abuser has admitted and is ordered into treatment by the court. Some treatment programs for abusers deal directly with their offending behavior and require admission of their acts, taking responsibility for the abuse or neglect, and for changing their behavior using methods such as relapse prevention and other techniques. Other treatment programs focus on the psychological stability and personality changes that need to be made by the abuser and nonoffending family members. Various adjuncts to psychotherapy are often used such as acupuncture, meditation, and other nonWestern techniques to stay calm and feel better. Choosing the right method often depends upon a combination of what is best for the child, what is best for the abuser, and what is best for the family. The following are some of the more popular treatment modalities that have some evidence-based effectiveness:

Offender Specific Treatment. This is a cognitive-behavioral treatment program for abusers that focuses on the abusers anger management and attitudes toward women and toward violence. Some of the programs deal with child abuse but not all. When first designed over 30 years ago, batterers' intervention programs provided battered women the option of cooperating with law enforcement and having an alternative to sending the batterer to jail or prison. However, as these group programs began to be conducted by the criminal justice system, they became more psychoeducational than psychotherapeutic, and men (or in some cases, women) who had a diagnosable mental illness were not getting appropriate treatment, especially as many of the programs only lasted for 6–12 weeks. Early models such as AMEND in Denver which utilized licensed therapists and kept batterers in treatment from 2 to 5 years still provide a more inclusive protocol (Walker, 2009).

Cognitive Behavior Therapy (CBT). These programs provide both conceptualization and treatment protocols for working with child abusers and nonabusing family members. Many of the skills that are taught in the various CBT programs are useful for helping them think about the targeted child and the situation in a different way. Most CBT protocols work with the individual in treatment although it may still be a cost-effective choice because behaviors to be changed are often targeted on a short-term basis rather than permitting them to come up in a more long-term person-centered treatment model. This treatment is particularly useful in getting the abuser to take responsibility for behavior rather than rationalization or blaming the victim. CBT can also assist neglectful parents by focusing on the issues that prevent them from dealing appropriately with their lives. However, the relationship issues that often need to be addressed in therapy may not get the attention needed to make major changes.

Dialectic Behavior Therapy (DBT). It is a newer treatment modality that has had success with adults who have a variety of cognitive and emotional problems, many of which may be traced back to their own childhood experiences (Hayes et al., 2003). Some of the areas that are addressed in DBT that have proven successful with difficult to treat clients include the concept of "mindfulness" which helps the person stay on task and face important issues such as the proper care of a child and the exercises in "emotional re-regulation," which assist the person to learn how to control and express emotions in a more appropriate way. Dealing with emotions before they build up and explode is important for many child abusers who cannot deal will with stress as they do not feel it until it is more difficult to control their reactions. This is especially important when working with adults who were abused as children.

Family Systems Therapy. It has provided many models of working with families where abuse has occurred (Gil, 1996; Kaslow, 1996). The goal is to avoid blaming each of the family members for the abuse and rather help them change the dysfunctional family system that permitted child

abuse or neglect to occur. Following a systems theory model, the therapist helps change in one area of family life which will then cause a shift in other areas because the family system that maintained the inappropriate behavior has changed. This model is particularly useful when the family stays together and each member needs to learn to pay attention to his or her own needs as well as the needs of other members in the family. When relational issues are the focus, family therapy can be useful as an adjunct to individual treatment using other modalities especially if empathy-building is an issue. In complex cases, especially when the child's needs may not get the attention needed, family members have been given their own therapists and when the family gets together, all the therapists are present.

Eye Movement Desensitization Reprocessing. It is useful in working with individuals who are dealing with their own trauma memories that are negatively impacting on their cognitions, emotions, and behavior. It is often used as an adjunct to other therapies although research indicates it may also be a stand-alone treatment. It is especially useful in teaching the abuser to control his or her emotional responses to the child's behavior that triggers their anger and abuse.

Supportive Therapy for the Non-Abusing Parent. It may be appropriate especially when that parent blames himself or herself for not knowing what was happening to the child or feels guilty for not being able to better protect the child. Some are genuinely shocked when they learn what has occurred and need support in uncovering their own use of denial or other psychological mechanisms that helped them not recognize the child's needs. In fairness, many children who have been abused reveal the extent to which they have gone to cover up the abuse for fear that the nonoffending parent may not be able to handle it and they might lose that parent's love and whatever support that is available.

Substance Abuse Treatment. It is a necessary adjunct to psychotherapy when the abuser or the nonabusive parent used alcohol or other drugs to cope with emotional issues. For many, the over use of substances also has caused problems in work productivity and in other relationships which need to be addressed. There are different theories and therefore models of substance abuse treatment that range from the belief that addiction is a disease often passed down genetically to models that stress the learned behavior in families. Most treatment is done in groups as it has been found that others in the same situation are more likely to confront the frequent manipulation and lies that substance abusers tell themselves as well as others. Usually substance abuse treatment programs utilize random drug testing as a method of helping keep track of clients' use. As abuse of a variety of substances, both legally prescribed and illegally obtained, is a frequent way of self-medication and many of these people also need medication for stabilization.

13.4.3 Prevention

Conceptualizing child abuse and neglect as a form of family violence that occurs within a family system, a local community, and a cultural community enhanced by exposure to media and street violence requires social prevention. As violence is more visible in crowded urban areas that are often inhabited by people living in poverty and feelings of hopeless, these conditions in the community need to be addressed as well as individual interventions with high-risk populations. Rural areas present their own difficulties especially since the isolation is able to cover up both child abuse and domestic violence.

The risk and resiliency model that public health systems adopt are particularly useful here (Mersky, 2009; Stith et al., 2009).

13.4.3.1 Primary Prevention

Primary prevention programs are those that educate the entire community through use of the media, religious institutions, schools, and other agencies frequented by the people who live in a particular community. Special risk groups may also be targeted by primary prevention programs such as improving prosocial competence and reducing at-risk behavior among youth. Promotion of nonviolent norms and addressing the spurt of violent behavior that often develops in at-risk adolescents is part of primary prevention. The APA Task Force on Violence and Youth (1993) stated that one of the most helpful prevention responses is the improvement in at-risk youth's cognitive skills. Learning to read and write at the appropriate developmental level builds competence and resiliency in children. Learning to control emotions, change attitudes towards violence, and building better interpersonal skills has been found to prevent antisocial behavior from continuing to develop in children from high-violence neighborhoods.

13.4.3.2 Secondary Prevention

Secondary prevention programs are directly aimed at children who are known to have been abused or neglected. Again, programs that build cognitive skills, improve emotional control, and encourage prosocial behavior with those selected youth have been found to increase their confidence, competence, and efficacy, which then interrupts the cycle of violence (Aronson et al., 2003; Kotch et al., 2008; McCurdy, 1994). Family systems therapy with families that are willing to get help may also interrupt further abuse and neglect.

The most important variable that prevented further delinquency in studies was the support of family members. Thus, helping the parents learn how to support the child through teaching positive affirming interactions may assist children in changing their dysfunctional and difficult to control behavior. The difficulty is in identifying those families that can be helped to change their dysfunctional patterns through therapy, those who need to redefine the family constellation in order to change, and those who can be strengthened so that the patterns change when the situation changes. In the latter group are welfare parents who enter into a job-training program where they learn new skills, feel better about themselves and their children, and change their dysfunctional and abusive behavior patterns without even working on them directly (Ascione & Arkow, 1999). In this group also are those parents who know what to do but are so overwhelmed by life that they cannot apply their knowledge to their behavior. Sometimes the addition of a family helper in this type of family will provide relief for all members. These are often called "wrap-around" services in community groups (Slattery & Knapp, 2003). For others, attending a parenting class may help teach a parent new methods of addressing family problems that then interrupts the abuse cycle in that family. These are particularly effective strategies for families where there is child neglect due to lack of resources.

13.4.3.3 Tertiary Prevention

The tertiary level of prevention are for those children and families where they need some type of time-out from their life patterns to try to heal and adopt new ones. The Child Protective System may be helpful in giving parents or children some time alone so that the family

dysfunctional patterns are broken. In some cases, child protection workers are sent into hospitals when new babies are born into families where abuse has been identified in other children. Cooperation with infant protection programs as well as removal of the infant may be the choice here. Reunification then can take place only if all members of the family are ready and willing to rebuild the family in a new way. Women who go into battered women shelters with their children are helped to use that time to rebuild their family, usually without the batterer being in the home full-time although sometimes the women do try to make their marriage work again. Batterers in intervention programs may also learn new skills that help them reunite with their families although that is a complex and difficult task. The children may gain strength from the children's programs in shelter and so they too are stronger and less susceptible to the effects of being bullied, intimidated, and abused (Espelage, 2003).

13.5 Expert Competencies

13.5.1 Legal Issues

The legal issues that arise in working with children who have been abused and neglected are both numerous and complex. In the USA there are at least three or four different courts that may take jurisdiction over these children: criminal court, if the abuser is prosecuted, juvenile court, if there is a dependency petition by the state against the parents, juvenile court, if there is a charge of delinquency against the minor, and family court, if there are custody disputes after a divorce is filed by the parents. Sometimes there are cases simultaneously in one or more of these courts, all of which will have an impact upon the mental health or forensic evaluator. Both legal and ethical issues are of great importance in these cases as the mental health needs of the child and family may be in conflict with the legal needs. Even when there are no conflicts, the requirements for working in the two different arenas may require different skills so both a forensic evaluator and a treating therapist for each member of the family may be involved. Issues include designation of who is the client – the court, the lawyer, the child and/or the parent, or a state agency; informed consent from adults and minors; legal rights especially the right not to incriminate oneself in criminal cases; competency issues for children around telling the truth; when, if ever, to use suggestive questioning or interview aids; and how to deal with recantations either before, during or after the examination.

13.5.1.1 Competency to Testify

The issue of a child's mental competency to testify at a trial with reliable information has been an area that psychologists may provide information to assist the court. Young children need to demonstrate that they know the difference between truth and lies, but asking them directly is insufficient. Bottoms, Perona, Sorenson, and Najdowski (2007) suggest that asking children facts that are verifiable, such as their teachers' names or details about how a particular place looks may be a better way to determine their competency. Older children may be asked the Grisso (1988) competency questions to make sure that any mental health issues that are present will not prevent the youth from giving reliable and valid testimony (Grisso, Borum, & Edens,

2002). Each state has requirements for age and competency to give testimony and in many states the child may be declared unavailable to testify if a mental health expert testifies that it will cause the child harm. Obviously, every case must be evaluated separately, as testifying is therapeutic for some children and harmful for others.

13.5.1.2 Forensic Versus Clinical Evaluations

Psychologists have been attempting to provide guidelines to assist in differentiating a forensic from a clinical psychological evaluation. Although in some cases, a psychologist may act as both a forensic examiner and a psychotherapist, this may cause a loss of objectivity that then harms the client, and so it is discouraged (APA Forensic Guidelines, www.apa.org; APSAC Guidelines, 2002). Others have set forth protocols that assist the mental health professionals in performing a forensic evaluation that utilizes review of documents as well as psychological interviewing and standardized tests upon which their opinions must be based (Bottoms & Goodman, 1996; Myers, 1997). Psychologists who perform emergency treatment for children who are in emotional distress as well as those who provide ongoing therapy may also be admitted as an expert witness to testify about their opinions of the child. However, they base their opinion on different information from the forensic expert.

13.5.1.3 Best Interests of the Child and Burden of Proof

The expert witness's opinion must meet the legal standard within that particular type of case. All cases involving children must be decided on what the judge finds is in the "best interests of the child" at different standards of proof. For example, criminal cases must be proven by the state prosecutor "beyond a reasonable doubt" which is often operationalized as 99.9%. Obviously this is a very high burden of proof to meet and few cases are sent to criminal court by prosecutors unless there is strong evidence. On the other hand, cases in dependency court usually require "clear and convincing evidence" that is usually operationalized at around 75% or "a preponderance of the evidence" that usually means 50.1% are more likely than not that the abuse occurred and the judges' findings are in the best interests of the child. Given these guidelines, the judge must weigh the evidence, taking into account that some evidence is stronger than other evidences. Judges also must eliminate evidence that is more prejudicial to the alleged abuser than "probative," which is defined as that which is helpful in meeting the best interests of the child.

13.5.1.4 Child Custody Cases

Judges sitting on child custody cases in family court usually do not have the expertise to determine what is in the best interests of the child even though that is their job. This is especially true when there are allegations of domestic violence and child abuse and neglect. Sometimes these allegations are not revealed until the family begins to separate. Therefore, they depend upon mental health experts to assist them in determining the child's needs and the parent's ability to meet them. Sexual abuse allegations often occur together with physical

abuse and psychological maltreatment. They need special interview techniques that will meet the legal standards set in various jurisdictions (Faller, 1996; Kuehnle, 1996; Kuehnle & Walker, 2003).

Cases that deal with domestic violence and child abuse are the most difficult for the court to protect children when divorce and custody issues are pending (Edelson, 1999; Jaffe & Geffner, 1998; Jaffe, Lemon, & Poisson, 2003; Jaffe, Wolfe, & Wilson, 1990). Most state custody laws have presumptions that are considered to be in the best interests of the child even though these presumptions have not been scientifically proven. To overturn a presumption in the law, the burden of proof must be met by the person who wants to change it. One presumption is that it is in the best interests of the child to have equal access to both parents even if the father has committed domestic violence against the mother. It is the mother's burden to prove that it is "detrimental to the child" or some version similar to this such as it "will cause irreparable harm to the child" for the parents to share parental responsibility.

Another presumption in some states is that the parent who is the friendliest to the other parent will make other decisions that are in the best interests of the child. Obviously, it is difficult if not impossible, for a mother who has been battered by the child's father, to be friendly to him. In some cases, when the child's mother believes the child is in danger from physical or sexual abuse or maltreatment by the father, she may attempt to protect the child. This may bring her into conflict with the court's orders to make sure the father has access to the child. Father's may retaliate by claiming the mother is alienating the child from him rather than try to understand what he has done to frighten and alienate the child. Mental health professionals who are not trained in understanding the impact of domestic violence on children may unintentionally reinforce the PAS claims. Courts that do not believe the mother's claim of danger to the child may place the child in the father's custody without regard for the child's safety.

13.5.1.5 Memory and Suggestibility of Children

Memory and suggestibility of children (Eisen, Quas, & Goodman, 2002; Bottoms & Goodman, 1996) is a major issue when conducting forensic evaluations of children. As was stated earlier, trauma memory may be different than cognitive memory, but until they are integrated, it may be difficult to rely upon the stability of young children's reports of abuse. Older children may recant their initial allegations of abuse if they get frightened that the disclosure will disrupt the family. It is important not to accept recantation of testimony without a thorough investigation.

13.5.1.6 Preparing Children to Testify

Forensic psychologists may be called upon to prepare children to testify (Eisen et al., 2002; Goodman, Pyle-Taub, Hones, England, Port, Rudy, & Prado, 1992; Myers, 1997; Myers et al., 2002). Attempts have been made for special accommodation for children so that they do not get frightened by sterile courtrooms or hostile cross-examination. For some children, the first time they see the abuser since the arrest will be in the courtroom and they may be intimidated and frightened. Preparation and support may help overcome these potential problems.

13.5.1.7 Legal Issues for Parents

The legal issues that arise for mental health professionals working with parents of children who have been physically abused or neglected are similar to those reported above when working with children. If one or both parents have been accused of perpetrating the abuse then informed consent from the parent and any lawyers involved must be obtained, especially if criminal or civil charges are still pending. They must be informed that the usual privilege of confidentiality that is afforded to psychotherapy patients does not apply in these cases and the evaluator has a special duty to report any danger to children, others, or themselves that is reported. Often the alleged perpetrator is ordered into a psychological evaluation without clarification about what are the legal questions that need to be answered. It is a very different evaluation if the legal question is whether someone is mentally competent, if that person is at risk to commit further violence or if that person should be treated in an in-patient or out-patient facility. Forensic evaluators must understand the legal issues before the court in order to conduct an appropriate evaluation. The APA Guidelines on these issues (www.apa.org) would help guide the clinician as would APSAC (2002) guidelines in addition to references discussed in the legal section on children.

It may be necessary to evaluate the parents separately rather than together, especially when issues of access to children or possible custody disputes are raised in the future. When criminal charges are pending, the nonoffending parent should not be interviewed together with the alleged offender, so as to avoid the appearance or actual bias in their later reports. If the clinician is the first interviewer to uncover child abuse, it is often best to focus on the child's needs and the parents' ability to meet those needs rather than go into further depth that might place the parents in legal jeopardy, spoil evidence, and create bias for the court later. Clinicians who are asked to perform emergency services but have no forensic training should immediately secure the safety of the clients, refer them to an attorney, and obtain legal consultation for themselves as it is difficult to know how to move through the myriad of legal issues surrounding these issues (Myers, 1997).

13.6   Summary

In conclusion, the field of child abuse and neglect has grown and matured since its beginnings over 30 years ago with the introduction of "battered child syndrome" into the health care literature. Medical doctors now specialize in the recognition of child abuse through behavior and confirm physical abuse through X-rays and other imaging techniques available today. Child abuse reporting is now mandatory, statistics are kept by nations, children's rights have become a global concern, and states intervene taking over as parents when necessary.

Psychologists and other mental health professionals are an integral part of the child protection system by assisting in the identification, assessment, treatment, and prevention of child abuse and neglect. However, competencies in the assessment, treatment, prevention, and legal issues must be developed when mental health professionals attempt to be helpful to children who have suffered from physical abuse and maltreatment and their families.

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14 Adolescent Sexual Offending

Barry R. Burkhart · Patrick K. Cook

Abstract: Adolescents who sexually offend present difficult and complicated demands for clinicians. The gravity of sex offending cannot be ignored, however, because adolescent offending does not necessarily presage adult offending, intervention must not preclude normal developmental opportunities. However, most adult persistent offenders begin offending during adolescence. Thus, clinicians have to provide effective treatment for the potentially serious adult offender while preventing negative second order effects that might create iatrogenic developmental consequences. The essential conclusions about the etiology of juvenile sex offending are that the processes are multi-factorial, complex and developmentally organized. Based on this analysis, assessment of the individual adolescent is critical to establishing an articulated treatment plan and five domains are identified as critical areas for the clinical picture. These are: (1) offender's victimization and abuse history; (2) social skills deficits, social isolation, and attachment difficulties; (3) deviant sex arousal and/or sexual preoccupation; (4) aggression and general delinquency; and (5) an exaggeration of "normal" adolescent sexual curiosity or exploration in a context of opportunism and weak supervision. Given the complexity of developmental pathways, no single model for intervention provides a sufficiently comprehensive approach for the treatment for juvenile sex offenders. Instead, treatment should be organized by a risk-need-responsivity paradigm that provides a useful algorithm for clinical treatment formulation. Additionally, the intervention must eventuate in the development of a non-stigmatized identity for the developing adolescent. Based on the notion that a risk-need-responsivity analysis should inform treatment, clinicians need to have a strong grasp of developmentally sensitive assessment, competency in navigating the social and legal contexts in which adolescent offenders are found, and be able to serve as a social and legal advocate based on a solid understanding of the empirical findings about adolescents who have sexually offended.

14.1 Overview

Barbaree and Marshall (2006) define a juvenile sex offender as "[a] person who has been convicted of a sexual offense and who is considered by law to be old enough to be held criminally responsible for the crime, but not so old as to be subject to the full range of adult criminal sanctions" (p. 3). While concise, this definition brings into focus a number of critical practical and conceptual issues having clear implications for professionals who work in this area. The first implication being that the cardinal criterion for identifying the client is not a specific behavior; it is an interaction between the client's behavior and the actions of the juvenile and criminal justice system. Given the difficulties of defining what is, or is not, a deviant sexual behavior for adolescence (Barbaree & Marshall, 2006; Bancroft, 2006) combined with the vagaries of the justice system, which vary by national and state jurisdiction and even to the level of the local court, what is defined as juvenile sex offense is so unreliable and elastic that it defies description. Moreover, this is not a context where clients can be counted on to provide veridical information.

Juveniles with markedly dissimilar behaviors often will have the same legal charge and those with the same behavioral event will have different legal charges. Moreover, the consequence of this variability is that clinicians may be working under profoundly different psychological and legal contexts depending on the charge applied to the client. For example, in the state of Alabama, if the charge is Sex Abuse 1st degree, then the client, even if only 12-years old, may be incarcerated for treatment, forced to go back to court after treatment, and be registered as a sex offender and placed on the notification register which would be available to anyone who had access to the Internet. If the charge is Sexual Misconduct (a misdemeanor charge), even if it is for the same behavior, then none of these sanctions may apply.

In different jurisdictions, even the same age child may be exposed to a profoundly different legal, correctional, and treatment process depending on the definitions in the law and the availability of treatment options. In some states, adolescent offenders may be treated on an outpatient basis, whereas in other states, with the same level of risk and offense, they will be incarcerated for treatment.

Moreover, the juvenile justice system has undergone large swings in philosophical stance with relation to how juvenile sexual crimes should be defined. The traditional philosophy of seeing adolescents, as a group, distinctly different from adults and, thus, requiring a very different judicial and correctional policy is now being threatened by the conservative movement to define all sex offenders as more alike than different, including obscuring or even obviating the distinction between juveniles and adults. Particularly with the passage, at the federal level, of the Adam Walsh Act, treatment providers are seeing the historic protection of juveniles from many of the adverse effects of the criminal justice system being eroded (Caldwell, Ziemke, & Vitacco, 2008). The developmental implications of being registered and subjected to adult notification in the life of an adolescent can hardly be imagined, though there is already some empirical evaluation of these pernicious outcomes (Letourneau & Armstrong, 2008).

Recently, Calley (2009) has demonstrated that one of the unintended consequences of the Adam Walsh act is that local judges are attempting to circumvent the notification consequences of the law by altering usual dispositional decision making to avoid charges that compel compliance with the registration requirements of the Adam Walsh act. In so doing, juveniles often are precluded from access to otherwise mandated treatment programs. Thus, the unintended consequence of the attempt to protect juveniles from an onerous and developmentally inappropriate community notification processes, is that juveniles who could benefit from treatment, are denied critical treatment opportunities. This outcome, in the context of the empirical demonstrations that treated juvenile sex offenders are at significantly lower risk for reoffending (Reitzel & Carbonell, 2006; Walker, McGovern, Poey, & Otis, 2004), is worrisome and illustrative of the negative, though unintended, second-order effects of poorly constructed policies and laws.

These legal and definitional issues are too extensive to be covered in this chapter, but, in the long run, may have more to do with defining and shaping the field than our evidenced-based judgments. The cardinal implication of this analysis of these social and legal processes is that clinicians may be required to be involved in political and social debates, if the opportunity for the best practices approach is even to be possible. In the remainder of this chapter, the focus will be on defining and describing what, currently, is seen as best practices for assessment and treatment of juveniles with sex offending behaviors; however, the recognition that the possibility

and opportunity to provide these practices is inextricably bound up with what happens in national and state legislatures should be part of the awareness of all providers who work with these children.

14.2   Recognition of Symptoms and their Assessment

The "symptoms" of adolescent sex offending are the behaviors which bring them to the attention of the court. What is required for professionals is a solid understanding of the epidemiology of these behaviors. Perhaps the most important core facts to appreciate about the epidemiology of juvenile sex offending are that: (1) juveniles commit a substantial proportion of sex crimes, particularly with children as victims (Pastore & Maguire, 2007); (2) by far the majority of adolescents who commit sex offenses do not continue to offend as adults (Worling & Curwin, 2000). In addition, a corollary of this fact is that treated adolescents have a significantly lower likelihood of committing another offense than untreated adolescent offenders (Hanson et al., 2002; Reitzel & Carbonell, 2006); and (3) a majority of adult sex offenders acknowledge that their first offenses began during adolescence (Gray & Pithers, 1993), and, for some of these offenders, the lifetime prevalence of victims they create is astounding (Abel et al., 1987).

These facts, taken together, have several important assessment and treatment implications. However, when considered separately, these facts can lead to very different and contradictory conclusions. Thus, conclusions must be drawn, carefully, and in relationship to each of the other facts. As these facts are reviewed, some of these contradictions and the important conclusions will be outlined.

The first fact, that adolescents are directly responsible for a large number of the sexual crimes committed, has clear implications for the necessity of preventing or treating juveniles who offend. According to Pithers and Gray (1998), 40% of the perpetrators of sexual crimes against children are children or adolescents. This fact represents a substantial sum of suffering and harm to innocent children and the implications to be drawn are that: (1) much more work needs to be done in the area of primary prevention and (2) early intervention is important, adolescents who offend should be promptly identified and provided appropriate treatment. The old judicial and clinical style of denying or downplaying sexual crimes against children when committed by other children/adolescents is not a good idea.

The second fact that most adolescent offenders discontinue sexual offending and do not persist as adult offenders, likewise is important to appreciate, particularly as it leavens the first fact. The modal number of reported victims of male adolescents adjudicated as juvenile sex offenders and placed in a large state residential treatment program is one and the mean is two (Burkhart, Cook, & Sumrall, 2008). Moreover, even though these boys were placed in a secure setting based on this conviction, over 50% had no previous commitment in the juvenile system. Additionally, though strong decreases in many of the identified areas of need were found as a function of exposure to treatment, particularly with internalizing symptoms, an increase in dimensions related to delinquency predisposition was noted (Burkhart et al., 2008). These findings parallel those of Bonta, Wallace-Capretta, and Rooney (2000), in which they found that low-risk, untreated offenders recidivated at lower rates than low-risk offenders exposed to a high-intensity treatment. This is a finding well recognized by other researchers (Dishion, McCord, & Poulin, 1999). Adolescents are learning machines who learn from adults and their peers, and, in fact, peers may well be more efficient teachers.

What this means is that treatment, though important, must not otherwise disrupt the normal developmental trajectory of juveniles who have offended sexually against children. Specifically, we must be alert to the possibility of iatrogenic effects which increase the social and psychological burdens for boys who are being treated for their offenses, most of whom are likely to spontaneously desist. Directly stated, the unintended side effects of treatment must be measured and considered as part of the decision making in evaluating the impact of treatment. Langton and Barbaree (2006) drawing on the work of Andrews and Bonta (2003) have outlined a useful conceptual algorithm in which initial risk levels, area of treatment needs, and responsive treatment form the crucible within which treatment for any specific offender can be organized. Langton and Barbaree further suggest that the recognition of treatment by need interactions should drive the research enterprise and that interaction designs, even on a post hoc basis, must be the prototype for effective and useful research. Thus, though treatment might be necessary to ensure that juveniles who sexually offend discontinue their sexual misconduct, the intervention must be sensitive and nondisruptive to a normal developmental trajectory. The least burdensome and restrictive treatment necessary to effectively treat the early adolescent offender is the model course.

There is an additional consideration which has been highlighted by the findings from longitudinal recidivism studies. Although the rate of sexual offending recidivism is relatively low, particularly in treated groups of offenders, the rate of general delinquent offending is high. For example, Reitzel and Carbonell (2006), across both treated and untreated samples, found that recidivism rates for nonsexual violent offending were 24.73%, for nonsexual nonviolent crimes, it was 28.51%, and for unspecified nonsexual crimes, it was 20.40%. These finding were based on an average follow-up length of 59 months. It should be noted that the rate of recidivism for sexual crimes was 12.53%. These data are typical of other follow-up studies which show a high rate of general delinquency in groups of adolescents who were originally identified as sex offenders. Smallbone (2006) reported that, in fact, juvenile sex offenders were two to four times more likely to recidivate for nonsexual crimes than for sexual crimes. Moreover, up to 10% of juveniles who were originally convicted of nonsexual crimes end up being reconvicted for sexual offenses (Rubenstein, Yeager, Goodstein, & Lewis, 1993).

Thus, if we adhere to the model explicated by Langton and Barbaree (2006), treatment of adolescent sex offenders must accommodate to the fact that there are far more likely to recidivate for nonsexual delinquency. Thus, the risk of such delinquent offending should be identified prior to treatment so that treatment components can be articulated to this identified risk. In our treatment facility, adolescents with sex offending problems have been separated from the general delinquent population based on the recognition that the general delinquents were quite a bit more antisocial and delinquent, qualities which negatively impacted the sex offending adolescents with modest delinquent histories (Burkhart, Peaton, & Sumrall, 2009; Burkhart et al., 2008).

However, fact number three moderates the above discussion. By the sheer number of victims created those few adolescent offenders who continue as adult offenders can have the impact of a typhoid-infected well on the public health. Abel, Mittleman, and Becker (1985) reported that the majority of adult sex offenders indicated that the onset of their sexual offending occurred prior to age 18. In addition, the lifetime prevalence rates reported by adult offenders who were guaranteed confidentiality are astounding and alarming. Moreover, even more alarming is the finding of a 25:1 ratio of self-reported sexual offenses to actual arrests among adult sex offenders (Elliott, Huizinga, & Morse, 1985). This fact has to be a part of policy and practices in the management and treatment of adolescents who sexually offend against children.

Given these data, the consequences of failing to effectively treat adolescent sex offenders, specifically those at high risk for adult persistent offending, are potentially disastrous.

The compelling implication of these facts, considered conjointly, is that we must be able to make empirically valid distinctions which "carve nature at her joint." We must be able to identify adolescents who are at risk of sexual offending and, for those who have begun to offend, we must then be able to inhibit their beginning trajectory, but not so bluntly that we cause other harm. Also, we must be able to capture in our risk analyses those who are likely to persist as adult offenders so that we can prevent the further development of an adult persistent offense cycle. The recognition that many adult offenders began as adolescents makes it necessary that those adolescents who are at risk for life course persistent offending be identified and that their pernicious developmental trajectory must be aborted.

The problem is that our current state of knowledge does not provide a scientific base to be successful at making these critical distinctions. Though there are no validated risk assessment procedures currently available (Rich, 2009), there is some recent evidence that experienced clinicians can identify, with a moderate level of accuracy, those high-risk adolescents who reoffend (Hagan, Anderson, Caldwell, & Kemper, 2008).

One additional critical general observation must be emphasized: adolescents who have sex offending problems are not alike (Rich, 2009). Thus, recognition of the heterogeneity of this population is one of the key starting points and guiding precepts of treatment. The exception to this observation is gender; boys are, by a factor of 20 to 1 or more, the more likely offenders in sexual misconduct. The practical implication of this fact is that the usual client will be a teen-aged boy. Moreover, though there are some data relevant for evaluation and treatment of girls (Hunter, Becker, & Lexier, 2006), the bulk of the research is addressed to the functioning and status of boys.

A global, comprehensive, post-adjudication assessment, therefore, should be the essential starting point for treatment professionals working with adolescents with sexual behavior problems (American Academy of Child and Adolescent Psychiatry, 2000). Rich (2003), also, provides an excellent outline of assessment domains and a guideline to organizing the relevant clinical data. To inform case conceptualizations, formulate treatment plans, and assess treatment progress (or lack thereof), the numerous strengths that standardized assessment measures provide including their comparative and predictive abilities must be used to the clinicians' advantage. Furthermore, an accurate assessment establishes an individualized baseline point in which change can be tracked throughout and following treatment. Finally, a solid foundation utilizing empirical assessment measures allows treatment professionals the ability to empirically test factors for which there may be a differential response in treatment (Langton & Barbaree, 2006). This ability to "test" hypotheses at both the individual and group level provides data that can be fed back into the treatment process to better improve treatment interventions. (Burkhart et al., 2008; Rich, 2009).

Working with juvenile sexual offenders in a forensic context presents additional unique concerns worth considering (Rich, 2003). Forensic assessments are unique in that those being assessed have an increased motivation to engage in deceptive behaviors (e.g., denial, minimization, malingering) in order to achieve some desired outcome. Juvenile sexual offenders are commonly mandated to complete treatment, are frequently resistant to be an active participant throughout treatment, and thus, typically cannot be considered to be collaborative agents throughout the assessment and treatment process. In fact, their motivations to obscure the "truth" regarding their offense behaviors may be considered to be both a natural and

self-protective response, given the negative outcomes associated with full and complete disclosure. Despite being relatively unsophisticated, many of these individuals report a great degree of shame and embarrassment related to their behaviors. The likelihood for adjudicated juvenile offenders to engage in some type of deceptive behavior is quite common, yet little empirical evidence exists examining the prevalence of such behaviors prior to the onset of treatment. For example, over 90% of juvenile sexual offenders who were interviewed following the completion of treatment reported being deceptive when initially describing their adjudicating offense (Burkhart et al., 2008). Offenders were most likely to underreport the total number of sexual offenses that occurred, the duration in which the offending behaviors occurred, and the total number of victims.

14.3 Maintenance Factors of Adolescent Sex Offending

Data from assessments of juvenile sex offenders have served as the empirical foundation for addressing etiological and maintenance issues regarding this population of offenders (Becker, 1998; Calder, 2001). The broad conclusions are: (1) that etiology is complex, multidetermined, and developmentally based and (2) no single model or factor has been definitively linked to the onset or maintenance of this behavior. Rich (2003), in an effort to provide a comprehensive account of this complexity, has listed 46 motivating and maintaining factors for juvenile sex offending. These 46 factors, he suggests, can be clustered into ten categories representing core domains in the etiology and maintenance of the behavior. These hypothetical categories represent a good conceptual summary of those domains to be studied; however, little specific research has been devoted to examining, in a theoretically driven process, the contributions of each these domains to the development or maintenance of adolescent sex offending.

At this point in the literature development, there are five areas which are consistently identified as high-probability predicates to juvenile sex offending. These are: (1) offender's victimization and abuse history; (2) social skills deficits, social isolation, and attachment difficulties; (3) deviant sex arousal and/or sexual preoccupation; (4) aggression and general delinquency; and (5) an exaggeration of "normal" adolescent sexual curiosity or exploration in a context of opportunism and weak supervision.

14.3.1 Offender's Victimization and Abuse History

A significant history of prior victimization is often found among individuals who go on to abuse others (Jonson-Reid, 1998). Thus, the notion of a "cycle of violence" or "victim to victimizer" has been applied to juvenile sex offenders as research clearly indicates that many juvenile sex offenders have been victims of abuse; however, the causal role in the etiology of subsequent offending behaviors has not been delineated.

Victimization as a child is related to subsequent delinquent acts during adolescence and adulthood. For example, Widom (1995) using a matched-sample design examined arrest rates during adolescence and adulthood for 908 children who were abused or neglected prior to age 11. Using official records documenting substantiated cases of physical and sexual abuse and neglect during childhood, 26% of those who experienced maltreatment were later arrested as juveniles compared to 16.8% of those not abused, with 28.6% of abused and neglected children arrested

as adults compared to 21.0% for those in the control group (Widom, 1995). Furthermore, sexually abused children, compared to nonabused control subjects, were 4.7 times more likely to be arrested as adults for a sex crime. In addition, physically abused boys were more likely than sexually abused and neglected children, as well as nonabused children, to be arrested as adults for rape or sodomy. As Widom highlights, an adult rapist may be motivated by violence rather than sexual gratification alone.

Sexual victimization during childhood, also, has been associated with subsequent acts of sexual perpetration. For example, Ryan, Miyoshi, Metzner, Krugman, and Fryer (1996) reported on a sample of juvenile sex offenders consisting of 1616 youth whose data were provided by treatment professionals from 90 members of the National Adolescent Perpetrator Network (NAPN) located across 30 states. Of these youth, ranging in age from 5 to 21 years of age (mean age 14-years old), 41.8% were victims of physical abuse, 39.1% were sexually abused, and 25.9% of the sample experienced neglect as reported at intake.

Worling (1995) compiled data on 1268 male juvenile sex offenders from eight studies that reported pretreatment and posttreatment accounts of sexual abuse. Across studies, histories of sexual abuse varied considerably as 19–55% of juveniles reported a history of sexual abuse. Of note, the rate of sexual abuse reported following treatment (52%) was significantly greater to the rate reported prior to the onset of treatment (21%). Worling (1995), citing clinical observations (e.g., Becker, 1988; Kahn & Lafond, 1988), postulated that the increase may be the result of a trusting therapeutic relationship allowing a greater level of disclosure or that the increase report of sexual abuse may be a treatment-learned justification/minimization behavior. Further-more, Worling reported that juvenile sex offenders with child victims reported being twice as likely to be sexually abused compared to juvenile sex offenders with peer-aged or adult victims (29.90% versus 14.94%, respectively). In addition, Worling grouped 87 juvenile sex offenders according to victim age and gender and examined the rate of sexual abuse according to groups. In total, 43% of the sample reported a history of sexual abuse; however, rates varied considerably according to the group with male, child victims reporting the greatest rate of abuse (75%), followed by those with male and female, child victims (74%), those with female child victims (24%), and finally, those who offended against peer-aged or adult, female victims (26%).

Burton, Miller, and Shill (2002) reported that 79.4% of 272 institutionalized juvenile sex offenders (mean age = 16.9-years old; SD = 1.47) were sexually victimized based upon self-reported responses on the Sexual Abuse Exposure Questionnaire. Of note, subjects were described to be mid-treatment when abuse information was collected. Of those who reported being sexually abused, the average age of onset was 8.8 years (SD = 3.97) with the average duration of sexual victimization lasting 5.6 years. Here, researchers speculated that high rate of sexual victimization (79.4%) compared to other empirical investigations with abuse prevalence rates of approximately 40% (e.g., Cooper, Murphy, & Haynes, 1996; Hunter & Figueredo, 2000) may be a function of the anonymous data collection process or that the data were collected after a treatment relationship had been formed; thus subjects may have been more willing to report abuse.

A history of abuse has been consistently linked to juvenile sex offenders; however, it is important to reiterate that most sexually abused juveniles do not go onto sexually abuse others and that the majority of male, juvenile sex offenders do not have a history of abuse. Nonetheless, victimization and the burden of other forms of abuse and neglect are clearly part of the treatment needs of juvenile sex offenders.

14.3.2 Social Skills Deficits

A significant portion of male, adolescent juvenile sex offenders has been described as lacking appropriate social skills (Davis & Leitenberg, 1987; Becker & Kaplan, 1988). These social deficits are believed to potentiate poor peer relationships, contribute to a burden of social apprehension, and, in some instances, lead to isolation. In fact, commonly used instruments designed to measure risk of reoffending with juvenile sex offenders address social support when determining level of risk. Furthermore, the observed deficits with adult sex offenders have been extended downward to juvenile sex offenders. For example, adult sex offender literature has identified, among a portion of these offenders, difficulty relating with peers and an inability to form and engage in consenting heterosexual relationships (Marshall, 1996). Therefore, adolescent sex offender researchers and treatment providers have attempted to empirically ascertain the relationship between social skill deficits and sex offending behavior during adolescence.

For example, Fehrenbach, Smith, Monastersky, and Deisher (1986) examined 256 male juvenile sex offenders and observed that a significant portion of these offenders (65%) were described as being seriously socially isolated. When male, adolescent child molesters ($n = 31$) were compared to delinquent, nonsex offending peers ($n = 34$) and nondelinquent adolescents ($n = 71$), child molesters endorsed feeling alone and socially isolated to a greater degree than nondelinquent subjects. Furthermore, results indicated that child molesters reported less assertion, greater anxiety and distress when in a social situations, lower self-esteem, and greater social maladjustment compared to nondelinquent subjects and less confidence regarding adequacy in hetero-social situations when compared to delinquents. Awad and Saunders (1991) reported that 33% of those male juveniles who committed hands-on, sexually assaultive offenses and 62% of child molesters were described as socially isolated, compared to 22% of delinquent control subjects, Furthermore, Miner and Crimmins (1995) reported that juvenile sex offenders had fewer peer attachments to that of delinquent, nonsex offender peers and nondelinquent subjects.

In regards to sexual recidivism by male, juvenile offenders, Kenny, Keogh, and Seidler (2001) reported data on 40 first-time offenders (mean age = 15.86 years; SD = 1.64) and 30 recidivists (mean age = 15.40 years; SD = 1.40). Here, researchers measured a greater frequency of "poor social skills" among recidivists (50%) when compared to newly adjudicated offenders (15%). Therefore, poor social skills is not only a construct of interest related to the etiology of juvenile sexual offending, it, also, may be related to subsequent acts of sexual offending by recidivists; thus, potentially having a significant role in maintenance of nonoffending status.

The aggregate of these results indicate that a significant portion of male, juvenile sex offenders experience deficits in social functioning. Additionally, the greater social deficits measured among juvenile sex offenders with child victims may be a function of their failed attempts to "connect" with peer-aged individuals. However, these results are not universal as several studies reported no differences in social competency skills relative to other delinquent and nondelinquent adolescents (e.g., Rowe-Lonczynski, 1992; Ford & Linney, 1995). These discrepancies suggest that poor social skills may be related to general adolescent delinquency and antisocial behaviors rather than specific to male, juvenile sex offenders alone. Therefore, causal relationships between social deficits among offenders and subsequent sex offending behaviors may exist; however, research has not established strong, direct causal links. Whether there is such a direct link, the bulk of the evidence suggests that, particularly for child target adolescent

offenders, some quality of social or attachment deficit is likely and remediation of these deficits should be a part of any comprehensive treatment evaluation. Thus, most treatment programs include treatment modules or components aimed at addressing and remedying measured socialization deficits.

14.3.3 Deviant Sex Arousal and/or Sexual Preoccupation

Cognitive-behavioral theorists, utilizing associative learning principles, hypothesize that deviant sexual arousal can be developed with the pairing of previously innocuous stimuli and stimuli that produce a sexual response (Alford, Morin, Atkins, & Schoen, 1987). Frequent parings of deviant sexual fantasies along with sexual arousal, including masturbation and orgasm, are hypothesized to contribute to the maintenance and strengthening of deviant sexual interests (Hunter & Becker, 1994). The pathway of deviant sexual arousal leading to action is poorly articulated within juvenile sex offender literature; however, deviant arousal patterns are considered to be one of the mechanisms by which problematic sexual behavior can be established and maintained which is a clinical focus when working with this population (Hunter & Becker, 1994), especially given the downward extrapolation from adult offenders. For example, a significant portion of 561 adult sex offenders reported their deviant sexual interest was established during adolescence (Abel & Rouleau, 1990) and deviant sexual fantasies were found among 29% of an outpatient sample of child molesters prior to age 20 (Marshall, Barbaree, & Eccles, 1991). However, a significant portion of males among a general population sample (31.1%) reported deviant sexual fantasies of forced sexual contact (Leitenberg & Henning, 1995) making the specificity of these fantasies difficult to establish with sex offenders. Further complicating the role regarding deviant sex fantasies are findings by Daleiden, Kaufman, Hilliker, and O'Neil (1998) who measured similar levels of deviant fantasy among juvenile sex offenders when compared to controls. Furthermore, Worling (2004) examined studies that relied on physiological measures of deviance (e.g., penile plethysmograph) and reported that only a fraction (25–36%) of juvenile sex offenders responded to sexual stimuli. Therefore, the emphasis on deviant sexual arousal as a "concrete" etiological factor of juvenile sex offending behavior has abated to some degree since first applied to juvenile sex offenders during the 1980s.

In an attempt to better understand the relationship between deviant sexual arousal and behaviors, researchers have relied upon self-report data regarding deviant sexual thoughts and fantasies given the ethical concerns of using physiological measures of deviancy with juveniles (e.g., Veneziano & Veneziano, 2002; Fanniff & Becker, 2006). Thus, the ability for treatment professionals to accurately identify deviant arousal patterns reliably among juvenile sex offenders is a current challenge given the questionable veracity of self-report data. Yet, identifying deviant arousal remains an important goal given the paraphilic interests of some juvenile offenders (Fanniff & Becker, 2006). For example, DiGiorgio-Miller (2007) compared 66 inpatient and outpatient male, juvenile sex offenders (mean age 15.2 years; SD = 1.45) on the Sexual Fantasy Questionnaire with inpatient residents reporting a greater number of deviant fantasies compared to outpatient offenders. Furthermore, positive correlations between deviant sexual fantasies and the number of victims, offenses, and measure of hostility were reported suggesting that more deviant fantasies were related to greater victimizing behaviors and offenses.

Using another distinction, Kenny et al. (2001) compared 40 male, first-time juvenile sex offenders with 30 recidivists. Group comparisons revealed that those offenders charged with more than one sex offense reported deviant sexual fantasies as a major offense feature (60.7%) versus those charged with a single sex offense (29.4%). Furthermore, of the recidivists, 60% were rated by their therapist as having deviant sexual fantasies, whereas only 32.5% of the first-time juvenile sex offenders were seen as having such fantasies. Lastly, significant, positive correlations were measured between rearrest for a sexual offense and deviant sexual fantasies.

Daleiden et al. (1998) reported that youthful sexual offenders endorsed more typical/nonconsenting sexual experiences than nonsexual offenders and college males. Furthermore, sexual offenders reported fewer typical/consenting sexual experiences when compared to delinquent, nonsex offending peers. Next, juvenile sex offenders reported more frequent paraphilic interests compared to delinquent, nonsex offenders and college males. It may well be that paraphilic interests are one of the mediators of adult persistent offending and, therefore, may require new research attention as the transition from adolescent offender to adult offender becomes more closely tracked in research.

14.3.4 Delinquency and Aggressive Behavior

A significant portion of juvenile sex offenders have a history of prior delinquent, nonsex offending criminal behavior. Estimates of criminal behaviors preceding a sex offense have been reported to range from 40% to 63% for these offenders (e.g., Fehrenbach et al., 1986; Kahn & Chambers, 1991; Ryan et al., 1996; Smith & Monastersky, 1986). Furthermore, the severity of these prior delinquent criminal behaviors varies considerably from minor offenses (e.g., misdemeanors) to violent acts against others (e.g., felony assault). In addition, a significant portion of juvenile sex offenders have had numerous prior arrests. Of the 1661 juvenile sex offenders examined by Ryan et al. (1996), 27.8% were measured to have committed four or more nonsex offenses. Thus, in addition to committing a sexual offense, a sizable portion of these offenders have a significant history of antisocial behavior.

Not only do many of these offenders have a history of previous delinquency, of those who recidivate following adjudication or treatment for a sexual offense, the majority will also commit crimes of a nonsexual nature. Measured recidivism rates for nonsex offenses range considerably as sample estimates of 35–54% have been reported (e.g., Rasmussen, 1999; Miner, 2000; Schram, Milloy, & Rowe, 1991; Vandiver, 2006). Of note, the rate for nonsex offending rearrest greatly eclipses the likelihood of rearrest for an additional sex offense as sex offense recidivism rates range between 8% and 14% (e.g., Kahn & Chambers, 1991; Miner, 2002; Rasmussen, 1999). The rate of rearrest and severity of crimes committed also ranged considerably. For example, Vandiver (2006) reported that the majority of 300 juvenile sex offenders followed into adulthood (52.7%) were rearrested ranging between 1 and 11 arrests. Furthermore, of this sample, the majority of rearrests were for property offenses (36.7%) followed by drug offenses (32.3%), but ranged in severity including one arrest for capital murder.

As a significant portion of juvenile sex offenders commonly have a history of general delinquency as well, they are at an increased risk at posttreatment for nonsex offending delinquency, these findings increase the complexity of treatment concerns to include general delinquency

issues, as well as sex offending specific components. The necessity of individual risk-needs analysis is highlighted by these findings.

14.3.5 Situational or Opportunistic Offending

One of the findings evident to many researchers is that the relatively high frequency of adolescents who were caught, having initiated sexual contact with a younger child, presents with little evidence of significant co-morbid psychopathology and no previous delinquent history. In our large sample representing most of the adjudicated adolescents in the state of Alabama (Burkhart et al., 2008), one of the largest groups were boys with one offense, no previous charges, and relatively benign psychometric test results. This group represents a subtype of the population of adolescent sex offenders who appear to be primarily situational or opportunistic offenders. When deconstructing their offenses, the modal pattern is that, having had some type of exposure to adult forms of sexuality, often video pornography, they are left with little supervision and access to a younger, vulnerable child. They attempt some kind of sexual contact, are discovered, and, as the Alabama state code requires treatment for adjudicated juvenile sex offenders, they are referred to treatment.

It is important to consider these offenders in light of the slowly accumulating knowledge about normative sexual experiences among children and adolescents (Bancroft, 2006). Even given the significant gaps and limitations in reliable information about sexual behaviors in childhood and adolescence, it is clear that children and adolescents have considerable sexual exposure and experience. Consider the findings of Reynolds, Herbenick, and Bancroft (2003), in which a sample of university students provided retrospective accounts of childhood sexual experiences with peers; 87% of the males and 84% of the females reported such an experience during childhood. These were most common during elementary school years and the subjects reported that the usual motivation was curiosity. Moreover, it should be noted that these experiences more frequently involved genital touching as the age of the child increased. With such a high base rate of childhood sexual experiences, it is not surprising that a subset of these boys and girls trespass legal boundaries and end up being caught up in the legal system.

The implications of these data have been not extensively considered in the literature. The necessity for a careful risk–need analysis, and crafting of a adequate, but not overdone, response to these adolescents seems clear, but there is so little information available about what are the specific development trajectories of the different types of adolescents with sexual offenses that it is difficult to draw the apparently clear implication that a policy of benign neglect might be appropriate for some of these cases.

14.4 Evidenced-Based Treatment Approaches

In his seminal book on juvenile sex offenders, Phil Rich (2003) makes the point that treatment of juveniles with sex offending problems is unlikely to be accomplished with limited, focused models of treatment. Instead, he argues that a limited treatment model focused on symptoms is not sufficient to effectively intervene and substantially assist the positive development of these adolescents. Based on his analysis of the complexity and magnitude of pathology found

in populations of juveniles with sex offending presentations (e.g., Ronis & Borduin, 2007; van Wijk, van Horn, Bullens, Bijleveld, & Doreleijers, 2005), having to deal with a developmentally dynamic population, and the fact that treatment is often confounded with criminal justice system involvement, Rich argues that treatment processes and rehabilitation with these adolescents most likely will be multifaceted, intensive, and complex. As he summarizes:

▶ Many juvenile sex offenders have never been in good health, emotionally or behaviorally, so rehabilitation is more a process of creation that renewal or restoration. Either way, the broadest purpose of treatment is increased functional ability and enhanced sense of well being, and, in the case of sexual aggression, public safety. This is no simple task, however. In fact, as complex and critical as evaluation is, it is far easier to evaluate, formulate, and diagnose individuals than to treat them effectively. (Rich, 2003, p. 218)

Moreover, at this point in the development of the literature, few, if any of the basic clinical questions about how sex offending adolescents should be treated have been asked or answered. There is a very modest foundational evidence for most treatment decisions. In fact, what once was thought to be a core and validated foundation for treatment, the relapse prevention model, has failed to be supported in two large treatment trials with adult sex offenders (Marques, Wiereranders, Day, Nelson, & van Ommeran, 2005). As a consequence, this model of treatment, though once considered the only standard form of treatment for both adults and adolescents, is now questioned with sex offending adolescents, given the lack of empirical support in adult populations and the absence of cohesive and coherent conceptual match with contemporary analyses of treatment needs of adolescents (Thakker, Ward, & Tidmarsh, 2006). Thus, there is no overarching or foundational conceptual model for treating sex offending problems. Unlike some areas, like anxiety problems, where there is reasonably solid understanding that exposure, however accomplished, must be a part of the treatment, there is no foundational conceptual principle which has solid theoretical and empirical support in the treatment of juvenile sex offenders. This leaves providers with little in the way of solid support for treatment decisions. We do not know what modes of treatment are best (groups, individual, or family) or even what methods (relapse prevention, empathy training, victim clarification, etc.) should be used, based on empirical foundations. Moreover, the ability to match juvenile offenders to specific treatments by clinically relevant dimensions (Langton & Barbaree, 2006) is, despite the clear need for such, simply not available. So, while there are numerous shibboleths about how treatment should be provided, there are few empirical validated guidelines for treatment.

Despite the absence of strong support for specific treatment approaches, there is a reasonably strong support that treated adolescent sex offenders typically fare much better than untreated adolescents in terms of sexual offending recidivism (Walker et al., 2004). In a recent meta-analysis of all the comparative outcome studies by Reitzel and Carbonell (2006), adolescents who had been treated had a sexual offense recidivism rate of 7.37%, whereas untreated controls had a sexual recidivism rate of 18.98%. These findings support the general value of treatment, even if little is known about specific treatment by aptitude interactions. Particularly, given public safety and public relations considerations, it is important that evidence supporting the effectiveness of treatment exists. Of course, these findings are weakened by the recognition that general delinquent recidivism is relatively high for treated sex offending adolescents. It is clear that all research must examine both sexual and nonsexual delinquency to provide a true estimate of positive clinical and social effects.

A significant exception exists to this summary, however. Two randomized clinical trial studies have found Multisystemic Therapy (MST) to be considerably more efficacious than comparison treatment of individual therapy (Borduin, Henggeler, Blaske, & Stein, 1990) or cognitive behavioral group and individual treatment provided in typical outpatient contexts (Borduin, Schaefer, & Heiblum, 2009). Although two studies cannot define a field, these findings deserve careful consideration. First, the current zeitgeist of the field is such that group-based cognitive behavioral treatment organized by relapse prevention concepts is ubiquitous and almost the standard method of treatment. For example, McGrath, Cumming, and Burchard (2003), in a survey of community programs, found that a large majority (91%) based their treatment on relapse prevention informed, cognitive behavioral treatment. Such a monolithic approach in the absence of any compelling empirical support for differential and enhanced efficacy represents a prescription for failure, particularly if there are few data supporting the paradigmatic treatment. Borduin et al.'s (2009) results combined with the absence of support for the conventional relapse prevention model of treatment with adults suggests that, at least, there should be an open approach to determining what kinds of treatment fits best with this population. In addition, MST has considerable conceptual appeal which will be reviewed in the following section.

A second new treatment approach, also, with considerable conceptual appeal is the Good lives model (Word & Mann, 2004). More a theoretical orientation than a discrete set of techniques, the Good lives model rests on the several theoretical, empirical, and developmental observations about adolescents who offend sexually. First, numerous writers have opposed the downward extension of treatment methods developed for adult offenders to adolescents (Miner, 2002; Thakker et al., 2006; Trivits & Reppucci, 2002). Arguing that there are profound and deep differences between the psychological characteristics of adult and adolescent offenders, that these differences are exacerbated by the developmental differences between adolescents and adults, and that the initiating and maintaining factors between adult and adolescent offending demonstrate little overlap (Miner, 2002), Ward and others (Ward, 2002; Ward & Mann, 2004; Thakker et al.) have argued that a fundamentally different approach must be developed for adolescents.

For example, a core component of the adult approaches to treatment is based on the concept of overcoming offender denial to enable the adult offender to take responsibility for identifying and controlling the essential cognitive and behavior patterns which characterize the offense cycle (Pithers, 1990; Pithers, Marques, Gibat, & Marlatt, 1983). Thus, the adult offender must accept and acknowledge that his or her behavior is the result of an ingrained and repetitive pattern in order to learn to disrupt and prevent the execution of the offense. Ward et al. argue that what defines adolescence is the opposite of a fixed pattern. Instead, adolescents are characterized by change, transformation, and, fundamentally, the absence of fixed or ingrained patterns. Instead, Ward argues that the core task of adolescence is to develop a set of core guiding assumptions about the world and, eventually, as a result of the cumulative effect of the adolescents' developmental experiences, a theory of self. Thus, Ward suggests that the fluidity and openness of the adolescent to developmental input create a developmental opening within which a positive model of the self must be created. In effect, one of the central tasks in treatment is to assist the "adolescent to change his conception of himself from that of a developing sex offender to someone trying to live a different life" (Ward, Polaschek, & Beech, 2006, p. 315). What must not happen is that the treatments have the effect of fixing in the adolescent that he is indeed a sex offender who is caught up in an addictive, lifelong process which he will have to guard against for the rest of his life.

14.5   Mechanisms of Change Underlying the Intervention

For MST, Borduin, et al. (2009) suggest that the positive results:

▶ may be due in part to its explicit focus on ameliorating key social-ecological risk factors that are related to problem sexual behaviors and place youths on a developmental pathway (or pathways) for sexual offending. Specifically, MST interventions (a) targeted important socialization processes that contributed to or maintained problem sexual behaviors and (b) promoted healthier (i.e., prosocial, strength focused, and age appropriate) interpersonal transactions in family, peer, and school contexts. (p. 35)

Additionally, they hypothesize that:

▶ improved family support, peer relations, and academic performance allowed MST participants to experience increased success in accomplishing educational, occupational, and other important developmental tasks (e.g., the formation of healthy romantic relationships) during the late adolescence and early adulthood. We suggest that a major limitation of typical treatments for juvenile sex offending is their relatively narrow focus and failure to account for the multidetermined nature of problem sexual behaviors and other serious antisocial behaviors. (p. 35)

Thus, treatment success depends on the ability of the therapist to intervene in multiple contexts in the lives of adolescent offenders and successfully promote alternative ways to meet the developmental demands associated within each of the critical life domains.

At this point in the development of the literature, there is an insufficient empirical base to declare any winners or losers. However, a sufficient nomological net of empirical and conceptual development does support a framework of treatment that is based on the principles of risk, needs, and responsivity (Langton & Barbaree, 2006), and that is responsive to the developmental, social, family, and environmental contexts of adolescents.

Thus, what appears to be critical in the treatment of adolescents is not a particular technique, but the ability to address complex, multi-factor problems through comprehensive, developmentally sensitive, and ecologically responsive methods. Thus, given the core finding of hetero-geneity among juvenile offenders, it is reasonable to expect that a complex and dynamically responsive model of treatment such as MST would be a strong candidate for effectiveness.

Moreover, the conceptual articulation between the precepts of MST and the Good lives model is impressive. Both approaches coalesce around a common set of principles founded on an awareness of the complex, multidetermined etiology and maintenance of the problem behaviors and a flexible, developmentally sensitive, growth-oriented treatment and intervention procedure. Thus, future development of a rapprochement between the technological strengths of MST and the conceptual framework and promise of the Good lives model may well be the next important conceptual paradigm. In addition, Koss, Bachar, and Hopkins (2006) have suggested that there is possible rapprochement between MST and concepts drawn from restorative justice theory.

An informed summary of the treatment outcome literature would have to conclude with a caveat that the poverty of intensive, controlled research with adequate follow-up provides little in the way of definitive guidance for a clear set of procedures. However, there is a growing consensus about a set of principles for effective intervention with adolescents with sex offending behaviors. These are:

1. Given the complexity of pathways to juvenile sex offending problems, comprehensive assessment of the identified adolescent patient is critical (Rich, 2003, 2009). At a minimum, awareness of the critical developmental areas associated with adolescent sex offending must inform treatment and a risk, needs, and responsivity analysis (Langton & Barbaree, 2006) must be part of the development of any treatment program or protocol. The principles of risk, need, and responsivity provide the conceptual blueprint which ensures that the heterogeneity of adolescent with sex offending problems will inform treatment.

2. Given the heterogeneity of adolescents with sex offending problems and the variability of risk and severity of offending behavior, a one-size-fits-all approach is not likely to work. At least, there needs to be a continuum of care in which low-risk offenders can be treated in a least restrictive and nonintrusive context and, for the fewer, high-risk adolescent, a safe, secure, and, likely, intensive model of treatment must be available. In particular, the areas of empirically relevant risk factors, etiology, and maintenance factors must be accounted for in any treatment plan. For some at risk offenders, this may need to include residential treatment. However, this is an empirical question which should be a focus for research efforts. The cost–benefit analysis of even intensive outpatient treatment (Borduin et al., 2009) compared to residential costs makes the case that only in the interests of community safety and clear treatment advantage should residential treatment be the preferred protocol.

3. The core development task of self-definition for adolescents requires that, whatever and wherever treatment is accomplished, intervention must be supportive of a self-development that is positive and noncontaminating, of a normal developmental trajectory. Moreover, the likelihood of iatrogenic effects mandates that a broad spectrum of outcome domains should be collected as a basic tenet of treatment outcome measurement.

14.6   Basic Competencies of the Clinician

Given that treatment of juvenile sex offenders is complex, has profound legal and social consequences, and is often embedded in multiple social, legal, and correctional contexts, it is unlikely that a new clinician could ever start self-training as the only pathway to competency. This is an area where an apprentice model of training seems imperative. Thus, it is likely that the skills essential to functioning as clinical provider for juveniles with sex offending problems should be acquired in a training context where the specialized assessment and treatment skills can be witnessed, modeled, and performed under close supervision and feedback. It would seem unwise to take on these cases absent a mentor or a training context supportive of the novice clinician.

As articulated by the above analysis, a core basic competency of clinicians in this area is the ability to conduct an appropriate assessment and organize a treatment plan based on a solid risk-level evaluation and a comprehensive treatment needs assessment. Clinicians need to be familiar with the process of risk assessment (Rich, 2009) and adept at using these data to define treatment needs and craft an appropriately articulated and responsive treatment plan. Rich (2003) has an exhaustive framework for a comprehensive psychosocial evaluation and report. Beginning clinicians would be wise to consult his outline. At a minimum, clinicians have to be able to conduct a thorough forensic clinical interview covering the following areas (American Academy of Child and Adolescent Psychiatry, 2000).

1. Assessment of the sexually abusive behavior. It is necessary to have the client describe the behavior which brought them into treatment. Although unlikely to be entirely truthful or transparent, the child's level of disclosure provides significant insight into his accommodation to his offense. It should be noted that denial or defensiveness is normative and the goal of the assessment is not to wring a confession out of the child. Instead, this is an opportunity to evaluate mechanisms for coping with his offense and the consequences which have accrued. At the same time, all relevant forensic and court documents should be obtained. The degree of discrepancy between self report and police reports can be astonishing.

2. Sexual history. What is important is this section of the interview is to ascertain how the child has arrived at this point in their sexual development. The child's exposure to developmentally inappropriate sexuality is particularly important, as there appears to be some link between developmentally inappropriate sexual exposure and risk of sexual offending. (REF) In addition, a full sexual history should be obtained, including both appropriate peer and autoerotic expression as well as inappropriate sexual behaviors and expression. It is important that the examiner be comfortable and forthright in this inquiry. Adolescents rarely answer a question not asked directly.

3. Developmental, family, and social history. It is often the case that children do not know the circumstances of their birth, or developmental milestones, or any of the usual components of a developmental or psychosocial history. Collateral interviews with parents or guardians are extremely valuable and should be obtained if at all possible. The circumstances of the child's attachment history, abuse and neglect history, and family functioning are critical. Children with significant attachment disruption and burdens of abuse and victimization are common in samples of adolescents with sexual behavior problems and knowing the details is valuable in developing articulated treatment plans.

4. Medical and psychiatric history. The base rate of previous psychiatric treatment in adolescents with sex offending problems is very high (REF) and co morbid psychiatric diagnosis is usual. Often, the degree of involvement in various medical and psychiatric settings is an indication of the difficulty of managing these clients; thus, this information becomes significant in the risk/needs analysis informing treatment. A significant part of the risk-needs assessment is identifying the burden of psychological/psychiatric problems and crafting a plan to ameliorate these problems. In particular, the prevalence and extent of depression should be carefully monitored. Suicidal status often is a powerful marker revealing the overall mental health functioning of these adolescents.

5. Academic history and cognitive functioning. Academic and intellectual functioning are core components of the capacity and course of treatment. Often, in fact, usually, these adolescents have histories of outright academic failure or very marginal performance as well as school behavior problems. If there is to be a chance for a good life, academic or vocational success is a critical component. In residential programs, considerable emphasis is placed on being able to be competent in the school environment. Successful outpatient programs such at MST, likewise, place a good deal of emphasis in enhancing the adolescents functioning in their schools. Thus, a thorough and targeted treatment plan will be based on the result of this component of the evaluation.

6. Standardized assessment. In our program (Burkhart et al., 2008), we have relied on several standardized tests and interviews. The extent and quality of information available has been useful in planning and evaluating treatment, and in creating a foundation for our local science. In the population of juvenile in our programs, we have been able to delineate the large

differences between the regular delinquent adolescents and those committed for sex offenses. Based on these data, we create different treatment tracks and have been able to create a better fit between the treatment needs of the boys and treatment resources. Finally, having an extensive pretreatment data base will allow for the development of local actuarial predictions based on follow-up analyses of treatment completion and recidivism.

7. Communicating risk levels. The work of evaluation in this population has far reaching effects as these evaluations provide the foundation for court decisions having lifetime consequences for the adolescent offender and for his community's safety as most jurisdictions have some element of risk informed registration or notification. In Alabama, for example, following completion of treatment, the clinician must provide a statement to the court outlining the adolescent's history and functioning in several behavioral domains, outline the client's response to treatment, and, based on this analysis, provide a recommendation for risk level. Typically, this recommendation is given great weight by the court and becomes the foundation for the court's assignment of a level of risk. The assigned level has profound consequences for how the adolescent will be treated in the justice system. Thus, it is imperative that clinical providers have a basic understanding of the literature on empirically relevant and reliably assessed risk factors and be able to communicate to the court the intricate nature of predicted risk.

Though there is a reasonable consensus that general cognitive behavioral approaches have utility, there is considerable support for the idea that responsive treatment will be defined by explication of the unique and particular needs of the individual adolescent. A boy with an intense burden of victimization and trauma in his history is likely to require considerable work at stabilizing his affective reactivity and inner turmoil before he will be receptive to recognizing his responsibility for his own sexual misconduct. An adolescent with a delinquent history and an early predisposition to an antisocial style may require a strongly structured and boundary-limiting intervention with a strong focus on evaluating violence-producing attributions in order for him to begin to recognize the impact of his behavior on his own life as well as others.

An additional core competency is the ability to work in nontraditional contexts. Clinicians working with adolescents with sex offending problems are going to find themselves having to broker interactions in forensic contexts, correctional settings, foster and child welfare agencies, as well as the usual gamut of academic and social contexts in which adolescents are embedded. Moreover, the work in forensic and correctional settings often require that clinicians provide courts, probation, and child welfare agents with risk analyses about their clients. In fact, this may well be one of the most frequent referral questions.

Thus, in addition to the usual competencies required of those who work with adolescents, a strong grounding in developmental psychology, flexibility in methods, and the ability to work in family and social contexts outside of the consulting room, clinicians have to be familiar with the language and methods of the legal system. Moreover, they have to be able to recognize the value and limits of risk analysis and actuarial procedures of all sorts.

Competencies also vary by setting. Clinicians working in residential setting, particularly, correctional contexts, have to be aware of the tendency for such settings to become custodial rather than truly correctional. There has been considerable evidence in the news about the corruption of correctional settings in which the drift toward coercive control has effectively obviated the practice of any genuine treatment. Inevitably, clinicians in these

settings become the guardians of the principles of noncoercive, nonabusive, psychologically sensitive treatment.

14.7   Transition from Basic Competence to Expert

The most critical skill in the transition from basic competence to expert level of functioning is the ability to perform a well-articulated and accurate risk, needs, and responsivity analysis. To accurately blend the data from actuarial assessment with the data from history and clinical evaluation to create a comprehensive and operational treatment plan is both difficult and essential to the successful result of treatment. In our facility, we invest a great deal of upfront clinical work in the forging of such a plan and rely on it to guide our interventions and keep the adolescent on track (Burkhart et al., 2008). An important corollary skill is to be able to translate this treatment plan into an operational plan for the client. Adolescents have to be engaged, they have to buy into the plan or an adversarial process can evolve. Expert clinicians can speak the language of youth, help them envision a self-worth working for, and pull them into the process of change without this appearing to be a loss of dignity or autonomy. A hallmark of expert clinicians is that they are able to create a relationship of close attachment, but one that allows for the adolescent to have a sense of his own autonomy and choice.

Being able to manage the complex systems and have the different stakeholders all on the same path is an additional level of expertise necessary for work with adolescents with sexual offenses. Clinicians often have to interact with judges, probation officers, school personnel, and district attorneys and influence or persuade them to share a common plan. Such correspondence is difficult as often these stakeholders have different constituencies and very different values relative to the treatment needs of the client. It is not unusual for clinicians to have to function as advocates. The danger in such advocacy is that the risk analysis has to be accurate and the clinician must not distort the level of risk as attached. Given the variability of settings, populations, and legal pathways by which these clients are sorted, the ability to conduct local science to define, evaluate, and manage the specific clinical needs of the adolescents for whom the clinician is responsible is a very important, advanced skill. Particularly given that, in most contexts, treatment is mandated; thus, little to no possibility to do broad based, randomized clinical trials, the necessity of being able to do within group evaluations, know the base rates of co-morbid conditions, have some access to effectiveness in terms of treatment response, both immediate, intermediate, and ultimate, seems to provide the only genuine foundation for self evaluation and program review. The value of having a spreadsheet of all the data for all the clients in a program cannot be overstated. Our ability to hold ourselves accountable depends directly on our ability to humble ourselves before the data.

14.8   Summary

Given that adolescence is the critical period for onset of adult persistent offending; all intervention with adolescents with sexual behavior problems can be considered as early secondary prevention as well as tertiary prevention of adolescent problems. Moreover, the costs of inadequate or insensitive treatment can be steep. The necessity and complexity of being able to match treatment needs to the individual circumstances of each child or adolescent and the

further implication that incorrect matches of treatment to individual needs can have iatrogenic consequences render this work critically important for the individual child and the society into which he will mature. A core research agenda should be to provide clinicians with reliable and valid tools that will allow for the accurate judgments necessary to match the adolescent with the best articulated treatment and develop the methods and principles by which effective interventions can be crafted.

The finding that nonsexual delinquents sexually reoffend at the same rate as treated sex offenders is one with considerable social and legal consequences. There are many more general delinquents moving out of correctional and treatment contexts than sex offending adolescents. If the rates of recidivism are the same, then the overall number of sexual offenders from the delinquent group must be that many times more frequent. Thus, it may well be that general delinquents account for far more victims than released juvenile sex offenders. The obvious implication is that sex offence prevention intervention efforts should be included for general delinquents as a component of their program of treatment.

Perhaps, the most important form of prevention will occur in legislative contexts in which the legal structure for managing adolescents with sex offending behaviors will be created (Zimring, 2004). There is a very likely consequence that failure to distinguish juveniles with sex offending behaviors from adult sex offenders, combined with the increasingly punitive and destructive handling of sex offenders in general, will lead to creating adolescents whose identity will be forged in the crucible of a legal context which condemns them to the stigmatized identity of a lifetime sentence as a sex offender.

Critical issues in the formation of social and legal policy have to be formulated. The downward extension of policies and procedures from adult offenders to juveniles must be thwarted. There is an accumulating conceptual and, recently, empirical literature that has identified the pernicious consequences of these policies (Letourneau, 2006). Developing developmentally appropriate and empirically informed policy is perhaps the most significant work to be accomplished in this area.

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15 Peer Problems

Gregory A. Fabiano · Rebecca K. Vujnovic · Meaghan E. Pariseau

Abstract: Peer problems are an issue that cut across diagnostic categories and childhood conditions. Peer problems are a critical target of treatment, as they are a strong predictor of negative long-term outcomes. Currently, there are a number of interventions for peer problems that are supported by research evidence. Notably, these treatments involve working directly with the child in peer settings (e.g., recreational settings, classrooms). Basic competencies for clinicians working to treat peer problems include effective assessment strategies and working with the child in the settings of interest. Advanced strategies include effective supervision of individuals working on peer problems with children and ensuring intervention fidelity, individualizing and tailoring intervention components to address peer problems, and working within systems such as schools or summer treatment programs.

15.1 Overview

The manner in which one interacts and forms relationships with others through early childhood, middle childhood, and adolescence is a cornerstone of most major developmental theories (e.g., Erikson, 1968; Parker, Rubin, Erath, Wojslawowicz, & Buskirk, 2006). The formation of social skills that permit effective negotiation of peer-related interactions and interpersonal relationships is arguably one of the most important developmental tasks. As such, peer relationships make a strong contribution to many aspects of normal and abnormal development (Bukowski & Adams, 2005).

Social acceptance by peers, presence of positive friendships, and using good social skills within the context of friendships predict a host of positive long-term outcomes (e.g., Hartup, 1996; Risi, Gerhardstein, & Kistner, 2003). Conversely, being rejected or neglected by peers, lacking in friendships, and exhibiting behaviors characteristic of poor social skills predict a number of negative long-term outcomes (e.g., Coie, Lochman, Terry, & Hyman, 1992; Ollendick, Weist, Borden, & Greene, 1992; Parker & Asher, 1987). Thus, children not only have to avoid poor peer relationships, but must also develop positive peer relationships to be on a trajectory for positive long-term outcomes.

Peer interactions are reciprocal and recursive in nature. Owing to their complexity, they are vulnerable to breakdowns or impairments across many potential phases of the peer-interaction process, spanning from initiation of social interaction, communication or social skills used during an interaction, to behaviors related to the maintenance or fostering of continued interactions/friendships. Thus, it is not surprising that peer-relationship problems are often impaired in children and adolescents who exhibit impaired functioning owing to externalizing or internalizing behaviors (e.g., Bukowski & Adams, 2005). For example, researchers have long known that children with ADHD (e.g., Pelham & Bender, 1982) or conduct problems (Coie & Dodge, 1998) have problems in peer relationships. Problems may range from simply being ignored by other children (e.g., not being picked to play in recess activities, being the only child not invited to a classmate's birthday party) to being actively rejected by other children

(e.g., being bullied during recess). A child with ADHD or CD may also tease and be teased by peers, get into fights with other children, and exhibit inappropriate social skills (e.g., is a poor sport during games). Likewise, children with internalizing problems may have problems exacerbated by peer victimization or poor peer interactions (e.g., Greco & Morris, 2001; Prinstein, Cheah, & Guyer, 2005).

It is also important to acknowledge that peer relationships are interwoven into most domains of functioning for children and adolescents. Thus, the individual's neighborhood, school, recreational activities, and home will all contribute to the context of the development of adaptive and/or maladaptive peer interactions. Although this point about the context of peer relationships may seem obvious, it is worth noting that many contexts do not have a primary focus on peer relationships as part of formal or informal intervention efforts. For example, Farmer and Farmer (1999) note how schools may not adequately support interventions related to development of appropriate peer relationships through the current standard of care. A practical example of this comes from the work of researchers (Bradshaw, Sawyer, & O'Brennan, 2007; Craig & Pepler, 1997; Craig, Pepler, & Atlas, 2000; Pepler & Craig, 1995) who highlighted a fundamental difficulty in targeting peer interventions in school settings: adults are generally unaware of the negative interactions between peers, such as aggression or bullying. Therefore, while adults are present in these situations, as they are unaware of the majority of negative interactions, it is difficult to institute effective adult-directed intervention efforts to target these behaviors. The situation can only be worse in instances when adults are not present, presenting a real challenge for the treatment of peer problems (e.g., in school cafeterias or on the bus; in unstructured peer interactions in the neighborhood). Thus, it is critical for adults and children to have open lines of communication with respect to information on occurrence of peer problems.

Given the importance of the development of positive peer relationships through childhood and adolescence, it is notable that the Diagnostic and Statistical Manual of Mental Disorders (DSM; American Psychiatric Association [APA], 2000) does not have any category for impaired peer relationships. A few categories include impairment in peer relationships as a hallmark feature of the disorder (e.g., autism, Asperger's disorder). In most cases, however, the DSM integrates a consideration of functioning in the domain of peer relationships into most childhood and adolescent disorders through the diagnostic qualifier stating: "The disturbance in behavior causes clinically significant impairment in social … functioning" (APA, 2000). Thus, regardless of a child's or adolescent's primary diagnosis or reason for referral, a careful focus on peer relationships is necessary during initial and ongoing assessments, as well as in treatment planning and implementation.

As outlined briefly earlier, establishing peer relationships is a critical developmental task, and peer problems are an important target for intervention and treatment. In the rest of the chapter, we will discuss the assessment of peer problems, maintenance factors related to the problem, evidence-based treatment approaches, what is known (and not known) about the mechanisms underlying change in the intervention, and the basic and expert competencies of clinicians charged with treating peer problems.

15.2 Recognition and Assessment

Symptoms exhibited by children who experience peer problems vary greatly due to the complex nature of peer interactions. Much of the information on the topography, variation,

and extent of peer problems comes from sociometric studies. Sociometric measures generally ask children in a group to nominate children who are liked and disliked within a group (Coie & Dodge, 1988; Coie, Dodge, & Kupesmidt, 1990; Masten, Morison, & Pellegrini, 1985; Newcomb, Bukowski, & Pattee, 1993; Pekarik, Prinz, Liebert, Weintraub, & Neale, 1976; Pope, Bierman, & Mumma, 1991). Based on data from sociometric peer nominations, researchers have identified five types of sociometric status that children are classified as per the peer ratings: popular, rejected, neglected, controversial, and average (Newcomb et al., 1993). In developmental research, four behavioral patterns have been linked with peer rejection. These include low rates of prosocial behavior, high rates of aggressive/disruptive behavior, high rates of inattentive/immature behavior, and high rates of socially anxious/avoidant behavior (e.g. Coie et al., 1990; Parker, Rubin, Price, & DeRosier, 1995).

Children of different sociometric status can be described as varying across three broad behavioral domains: sociability, aggression, and withdrawal (Newcomb et al., 1993). Based on the results of a meta-analysis of sociometric status, Newcomb et al. describe distinct behavioral patterns that discriminate the five sociometric status groups from one another. Compared with children of popular and average status, children who fall into the rejected sociometric status have lower cognitive abilities, are less sociable, and more aggressive and withdrawn. Within the broad domain of aggression, rejected children have increased disruptive and negative behaviors, along with higher levels of physical aggression. In addition to elevated levels of inappropriate behaviors, rejected children also exhibit low levels of positive behaviors, such as prosocial actions and friendship skills, and have higher than average levels of social withdrawal. In contrast to rejected children, those who fall into the controversial status exhibit higher levels of sociability than do average children. However, controversial children also show higher than average levels of aggression and disruptive/negative behaviors. Controversial children also have higher cognitive abilities than rejected children, and their positive, prosocial actions are equal to those of children in the popular status. The behavior of neglected children, on the other hand, appears to deviate the least from that of average children. In the domains of aggression and sociability, neglected children show lower levels than do average children, while having higher levels in the domain of social withdrawal. Coie, Dodge, and Coppotelli (1982) describe neglected children as being ignored and receiving little notice from their peers, but they are not actively disliked.

Prosocial behavior has been shown to be a stable predictor of peer acceptance, while aggressive and disruptive behaviors are related to peer rejection. Children who show low levels of prosocial behaviors have difficulty in the areas of positive behavior and communication skills, emotion regulation, and social awareness and sensitivity. Children who exhibit high levels of physical and verbal aggression are at high risk for peer rejection due to their frequent exhibition of disruptive behavior. Difficulties in emotional regulation are often reflected in disruptive and oppositional behaviors that are also linked to peer rejection, such as irritability, insecurity, children who are overly sensitive and quick to blame others, highly reactive to frustration, resentful, easily annoyed, and generally unhappy.

High rates of inattentive/immature behavior are also associated with peer rejection. This includes behaviors, such as high levels of distractibility, difficulty staying on task and concentrating, and socially immature and insensitive behaviors. When children exhibit socially aversive behaviors, such as failing to follow social protocols, joint activities and play become unpleasant and unpredictable (Barkley, 1996; Pope & Bierman, 1999). Children who have low levels of self-control, such as deficits in following rules and understanding principles of fairness

and reciprocity, also tend to experience peer rejection (Landau & Milich, 1988; Saunders & Chambers, 1996). Notably, the negative effects of these behaviors on peer perceptions of a child are almost immediate (e.g., Pelham & Bender, 1982).

An additional behavior that has received recent attention from researchers is relational aggression. Relational aggression involves directing harm at a relationship or friendship. For example, a child may spread gossip or rumors about another, threaten to end the friendship, or shun a child or group of children (Crick, 1996; Ostrov & Crick, 2007). There are measures that can be completed by teachers to investigate the extent of relational aggression (i.e., Children's Social Behavior Scale, Crick, 1996; Preschool Social Behavior Scale, Crick, Casas, & Mosher, 1997), and sociometric measures completed by peers can query the extent to which children exhibit this behavior. In addition to physical aggression, relational aggression is an important construct to assess as well because of its potential impact on aggressors and victims.

The fourth behavior pattern that is associated with peer rejection is with regard to a child who exhibits high rates of socially anxious/avoidant behavior. Children who are fearful, anxious, and appear uncomfortable around other children are at risk of experiencing peer rejection (Rubin & Stewart, 1996). Children who are isolated or ostracized from their peers are restricted in their ability to develop social skills and self-confidence, which can lead to a cycle of negative socialization. Children may also be rejected by their peers because of atypical characteristics, such as a handicap or minority status.

The complexity of peer problems necessitates that assessment be comprehensive and idiographic, and integrate information from multiple informants. Bierman (2004) notes that assessment of peer problems must include consideration of behavioral, affective, and cognitive features of the child, as well as the characteristics of the child's peers. Behavioral characteristics include aggressive, immature, and inattentive behaviors, as well as deficits in prosocial behaviors. There are a number of well-developed and valid measures for documenting the presence of these characteristics (e.g., Child Behavior Checklist and Teacher Report Form, Achenbach & Rescorla, 2004; Behavioral Assessment System for Children, Reynolds & Kamphaus, 1998; Social Skills Rating System, Gresham & Elliott, 1990). Affective characteristics include negative expectations, being easily aroused emotionally, or ambivalence in social situations, which can also be measured with standardized methods (e.g., Asher, Hymel, & Renshaw, 1984; Cassidy & Asher, 1992; Harter, 1982; LaGreca, Dandes, Wick, Shaw, & Stone, 1988). Cognitive characteristics include negatively biased evaluations of social situations, lack of problem-solving skills, or inaccurate perceptions of social situations (Bierman, 2004). Finally, quality of the peer relationship itself might be evaluated using the child's self-report or other measures (Bukowski, Hoza, & Boivin, 1994; Coie & Dodge, 1988; Crick & Bigbee, 1998; Parker & Asher, 1993; Ried et al., 1989; Wheeler & Ladd, 1982).

The purpose of assessment is to inform intervention and treatment efforts; therefore, assessment must be individualized so that each child's unique behavioral, affective, and cognitive characteristics, as well as the context in which problems occur, can be appropriately considered. In each assessment, a functional analysis of the peer problems a child is experiencing should be included. A functional analysis involves isolating and clearly defining the specific peer problems the child is experiencing (e.g., become physically aggressive when peers do not follow his lead during group activities). Next, antecedents or events that occur immediately before the specific behavior(s) are examined. All aspects of the context in which the specific behavior occurs should be considered when identifying antecedents. Consequences

of the specific behavior or what happens immediately following the behavior(s) should be examined to determine what function the behavior is serving for the child. This functional analysis allows for the identification of both the immediate peer problems the child is experiencing, as well as the hypothesizing of long-term correlates such as the child's reputation among peers.

Assessment of peer problems should include information from multiple sources, including peer ratings, teacher ratings, self-ratings or interviews with the child, and direct observation (Bierman, 2004; Coie & Dodge, 1988; Pepler & Craig, 1998). Information from these multiple sources can be integrated to form a more comprehensive picture of the child's peer problems, as gathering information from each source has advantages and limitations, and varies in three important ways: access to information about the child, cognitive biases and limitations, and the nature of the relationship with the child (Newcomb et al., 1993). Newcomb et al. note that adult (parent and teacher) ratings may be limited due to lack of direct contact with the child during salient social situations, as they are more likely to interact with children in structured settings where less peer interaction takes place. Adults also may have limited knowledge about the child's feelings, values, and beliefs. Additionally, adults interact with children as part of a non-equal relationship, which is different from the interaction children have with their peers. Although adults may be poor reporters regarding the nature of children's peer relationships and the specific strengths and weaknesses, there is some evidence that parents and teachers are accurate in their identification of rating whether peer relationships are impaired (Fabiano et al., 2006).

Regarding peers, Newcomb et al. (1993) outline that they have access to information about the child's behavior in terms of the norms of the peer group, and within the structure of interactions among equals. However, utility of peer reports varies with cognitive and developmental levels. Peers may also be biased by past information about the child such as reputation. Children's self-reports are also subject to their cognitive and developmental levels, but are more accurate for identifying the child's beliefs, feelings, and values related to social situations. However, children's accuracy in reporting their self-perceptions can vary greatly (Newcomb et al.; Owens, Goldfine, Evangelista, Hoza, & Kaiser, 2007). Similarly, direct observations of children's behavior are impacted by the pre-existing biases of the observers, the observers' training, the coding scheme used, and the influence that an observer's presence has on the social situation (Newcomb et al.).

15.3 Maintenance Factors

Social competence and cognition, peer response, as well as other external factors may contribute to the maintenance of poor peer relations, if not addressed. Consideration of such socially constructed factors suggests that while discrete behavioral skills may be developed through individual therapy, the key to improving peer relationships relies on interventions beyond the clinician's office.

The foundation of social competency relies on executive functioning within social contexts (Cavell, 1990; Dodge & Murphy, 1984). Several discrete behaviors and social skills have been identified as essential for enabling effective social functioning. Specific behaviors include: encoding skills, considered as the ability to perceive and interpret the situation; decision skills, eliciting and evaluating possible responses; and enactment skills, which include enacting and evaluating the selected response (Dodge & Murphy, 1984; McFall, 1982). Additionally, social

skills include prosocial behavior, adaptive problem-solving skills, and emotional regulation (Bierman & Welsh, 1997).

When considered within a developmental framework, social competence moves beyond a set of discrete social behaviors to include a child's ability to manage her/his own behavior in various social contexts, which elicit a positive response while avoiding a negative response from others participating in the interaction (Bierman, 2004; Bierman & Welsh, 1997; Dodge & Murphy, 1984). The possession of socially appropriate behaviors is necessary, but is not sufficient for one to be considered socially competent (Biernman, 2004). Social competence also requires social-cognitive ability, allowing the individual to utilize such behaviors to accommodate the ongoing social interaction (Beirman, 2004; Bierman & Welsh, 1997). Clearly, this is a quite complex combination of behaviors that have both reciprocal and recursive feedback effects on social interactions.

The foundation of social-information-processing models asserts that children's understanding and interpretation of social situations influences their related behavior, which is, in turn, the basis for other's evaluation. Crick and Dodge (1994) present a complex yet very well-defined model of social-information-processing. The empirically supported cognitive distortions of maladjusted/rejected children within the framework of the social information processing model of children's social adjustment is a useful way to think about the complexity of social interactions, as well as the multiple areas where intervention may be necessary (Crick & Dodge, 1994). In brief, children need to create a mental representation of the social situation, identify their own social goals, access their own memory of social history to generate potential behavioral responses, and select a behavioral response. Maintaining factors in a child with peer problems could occur at any one or more of these steps, and problems could be present at different steps across different social situations. One of the challenges in identifying maintaining factors is to conduct an assessment that comprehensively identifies all antecedents and consequences of peer interaction behaviors (both positive and negative). Furthermore, while deficits in social competence may maintain difficulty in peer relationships, subjective peer expectations may maintain social difficulties, especially for children with acknowledged learning and behavioral problems. Such children with diagnostic labels (e.g., learning or behavioral disordered) were perceived more negatively by their peers, who were less friendly and less involved in the interaction, which in turn, contributes to the maintenance of social difficulties (Milich, McAninch, & Harris, 1992). These problems are compounded by a lack of awareness of how these negative behaviors contribute to negative peer outcomes, compounding the problem over time (e.g., Hoza, Waschbusch, Pelham, Molina, & Milich, 2000). As some maintenance factors may involve cognitions (e.g., a hostile attributional bias), emotions (low feelings of self-worth or feelings of social anxiety), or the behaviors of other children (e.g., teasing/name-calling; Scambler, Harris, & Milich, 1998), clinicians have a tall order to meet in their evaluation and intervention efforts.

After enacting the response decision behavior, children are subjected to evaluation by their peers. Peer rejection has been found to be relatively stable in childhood. Over the course of a 5-year period, rejected children remained rejected, suggesting stability of the status (Coie & Dodge, 1983). Perceptions of rejected children suggest that peers utilize negative or biased stereotypes and expectations, which results in adverse treatment or victimization of the rejected child in comparison with an accepted peer (Bierman, 2004; Perry, Kusel, & Perry, 1988). Consequently, for aggressive children, persistent adverse treatment may elicit and reinforce further aggressive behavior (Bierman & Welsh, 1997).

Finally, maintenance of peer difficulties may result from additional factors, which are considered to be external from the individual's unique social skills and deficits. These include deviant peer-group acceptance, as well as family factors and other community/neighborhood influences. Aggressive or antisocial preadolescents and early adolescents may establish friendships with other deviant peers. This, in turn, supports and reinforces deviant behavior, as it is highly probable that when one member of a deviant peer group engages in problem behavior, other peer group members will also engage in the deviant behavior (Brendgen, Viaro, & Bukowski, 2000; Dishion, Andrews, & Crosby, 1995; Wasserman et al., 2003). Furthermore, exposure to deviant peers is associated with drug use, antisocial behavior, violent offenses, and is a stronger predictor of delinquent behavior than family, school, and community factors (Elliott & Menard, 1996; Thornberry & Krohn, 1997). Neighborhood socioeconomic status may also contribute to peer relationships; however, neighborhood effects may be mediated by parental behavior, especially for young children (Tietjen, 2006). Additional external factors that have been empirically associated with poor peer relationships include an authoritarian parenting style, parental psychopathology, divorce and marital conflict, exposure to neighborhood violence, and no or low quality child-care experience, particularly for children from lower socioeconomic families (Dishion et al., 1995; Tietjen, 2006).

15.3.1 Evidence-Based Treatment Approaches

Given the significant and sustained impairment experienced by children with peer problems, and the impact of this impairment on long-term outcomes, effective treatments are clearly needed. Most task forces or work groups that establish criteria for and evaluate evidence-based practice, aim to evaluate treatments for a particular DSM disorder. Thus, there is a challenge in identifying evidence-based treatment approaches for addressing peer problems, which cut across diagnostic categories. In the present review, evidence-based approaches that primarily focus on the development of appropriate social skills and adaptive peer-related behaviors as well as the reduction of negative behaviors that impact peer interactions will be reviewed.

However, before reviewing evidence-based interventions, interventions that are *not* evidence-based will be briefly discussed. Simply enrolling a child with peer problems in a community activity such as sports or scouting is not an effective intervention – without adequate structure and support, it is unlikely that by simply increasing the frequency of peer interactions there would be an improvement in the existing problems. Further, a commonly used, but not evidence-based, intervention for peer problems is individual counseling or social-skills training conducted by a therapist. In this intervention, individual meetings with a psychologist or other professional and "lunch bunch" meetings facilitated by school psychologists or counselors are included. With notable exceptions (see the discussion of Webster-Stratton's social skills program, below), the preponderance of available evidence does not support this intervention for children with peer problems (e.g., Fox & Boulton, 2003; Pelham & Fabiano, 2008; Rao, Beidel, & Murray, 2008), and clinicians report it as being less effective than other interventions (Miller, DuPaul, & Lutz, 2002). Indeed, in a comprehensive review and meta-analysis of social-skills training programs for children with disruptive behavior disorders conducted by Kavale, Forness, and Walker (1999), a modest effect size was generated (mean = 0.20), with 27% of studies yielding a negative effect size (i.e., treated children fared worse in these studies).

Upon closer review, these results are not surprising. Given the complexity of peer interactions, it is folly to believe that an adult (i.e., not a peer) can meet individually with a child and instruct the child in the best manner for negotiating a variety of evolving and frequently subtle social situations (that are impaired to the point of needing clinical intervention) involving one or more peers. For this reason, peer problems cannot be treated in an office or outside the presence of peers – it is necessary for interventions to be implemented within the settings where peer problems occur. It is clear from the discussion that follows that evidence-based interventions are those that work directly with the targeted child in the problematic settings to teach skills and competencies in important functional domains and implement contingencies or modify setting events to reduce the occurrence of problematic behaviors.

Subsequently, we will briefly provide an overview of evidence-based peer interventions for common childhood disorders. For the most part, peer interventions have focused on children with externalizing disorders, such as ADHD, Oppositional Defiant Disorder, and Conduct Disorder. Interventions for children with internalizing disorders and the prevention of bullying or aggression will also be reviewed. Importantly, this is not intended to be an exhaustive list of evidence-based interventions for peer problems. Rather, the focus is on a brief description of treatments that have a core component that addresses peer problems. Many other evidence-based interventions for childhood disorders address peer problems in addition to other targeted behaviors (see the first issue of the 37th volume of the *Journal of Clinical Child and Adolescent Psychology* for a comprehensive review of evidence-based interventions for child and adolescent disorders).

ADHD. The summer treatment program (STP) for children with ADHD is an evidence-based intervention for peer interactions (Pelham & Fabiano, 2008; Pelham, Fabiano, Gnagy, Greiner, & Hoza, 2005; Pelham, Greiner, & Gnagy, 1997; Pelham & Hoza, 1996). The STP is structured to be comparable with a typical 8-week summer camp; children participate in structured recreational activities, such as basketball, baseball, soccer, and swimming, attend an art class and an academic classroom, eat lunch and participate in recess together, and they transition between activities together. Across activities, 12–15 children with ADHD are grouped together for the entire summer. Thus, in addition to providing ample opportunity to observe peer interactions in ecologically valid settings, the ongoing functioning and interactions can also be evaluated. A unique aspect of the STP is that an intensive contingency management behavior modification program is interwoven into every activity throughout the program day. Children earn points for positive behaviors (e.g., sharing) and lose points for negative behaviors (e.g., teasing a peer), and points may be exchanged for camp privileges or rewards. Additional interventions such as public recognition for appropriate peer-related activities (i.e., a social skills "button" awarded to a child who best exemplified positive social skills the day before), brief social-skills training discussions (i.e., a 15-min discussion of social skills at the beginning of the program day that includes role-plays and modeling), and praise statements directed toward children exhibiting positive social skills are also liberally used in the program.

While the contingency management token economy generally aims to reduce the occurrence of negative peer-related behaviors, one of the goals of the STP is also to teach children skills and competencies in key domains related to peer relationships (Pelham & Hoza, 1996). For example, many children with ADHD are excluded from or struggle during community activities such as sports or other recreational activities (e.g., Pelham & Bender, 1982). To the extent that these activities are an important forum for learning social skills and interacting with

peers, children with ADHD, who already struggle in peer interactions, are placed at a further disadvantage. Therefore, children in the STP receive intense instruction on the rules and applied practice in necessary skills for sports and other group activities. The purpose of these activities is to increase the competencies and skills of the children, so that when they return to their neighborhoods, schools, and playgrounds, they are effective and proficient members of the group or team. Moreover, the progress made and success experienced in the sports domain during the STP possibly contributes to the large parent- and child-reported increases in self-concept at the end of the STP (Pelham & Hoza, 1996).

A recent review of evidence-based treatments for ADHD (Pelham & Fabiano, 2008) evaluated those who had research support for peer interventions. Results of the review indicated that the STP met criteria for a well-established treatment based on a number of group design, cross-over, and single subject studies. What is presently unknown is which components of the STP (e.g., token economy, sports training, staff monitoring of peer-related behaviors) are responsible for the significant effects. Future studies that work to dismantle the intensive intervention to elucidate the active ingredients of the effective peer intervention are needed. In addition, these positive findings in the STP setting for children with ADHD are tempered by a lack of effective treatments outside the intensive programs (see Hoza, 2007 for a review).

Internalizing disorders. There is relatively less research available on explicit peer-problem interventions for children with internalizing disorders related to anxiety or mood. Greco and Morris (2001) reviewed the literature on improving the behavior of children who were shy, and they concluded that there is evidence for cognitive-behavioral interventions aimed at improving social interactions. However, most studies were conducted in clinics or specialized settings, and it is unclear how the results might be generalized to naturalistic peer groups. For example, Beidel, Turner, and Morris (2000) treated children with social anxiety in a 12-session program that included social-skills training, exposure sessions, and generalization activities, such as participating in a recreational activity. When compared with an attention control condition at post-treatment and follow-up, children in the intervention group exhibited improved social skills, and two-thirds no longer met the diagnostic criteria for social anxiety disorder. Importantly, treatment gains owing to the cognitive-behavioral treatment were maintained as long as 5 years post intervention (Beidel, Turner, & Young, 2006). These results are promising, and suggest that increased attention to the treatment of peer problems in children with internalizing disorders is needed.

Conduct problems and aggression. The Coping Power program is a 34-session intervention designed for children with anger- or conduct-related problems, and impaired peer relationships (Lochman, Coie, Underwood, & Terry, 1993; Lochman, Wells, & Lenhart, 2008). The program focuses on skill development related to problem-solving and anger management skills, social skills such as dealing with peer pressure or negotiating peer interactions, and also supports the development of positive school-related skills. The Coping Power program is conducted in group settings with other same-age children. It also includes a parent management training component to facilitate the generalization of child social skills into the home setting. As currently constructed, the Coping Power program can be implemented over the course of a year and a half. A recent review categorized the child social-skills training component of the Coping Power program as probably efficacious (Eyberg, Nelson, & Boggs, 2008).

Another intervention specifically tailored to address peer problems for children with conduct problems is the Incredible Years Dina Dinosaur social-skills training curriculum (Webster-Stratton & Hammond, 1997; Webster-Stratton, Reid, & Hammond, 2001, 2004) for young

children with conduct problems. In this program, children attend weekly groups that target the development of appropriate social skills. Children engage in a number of activities during the session including watching videos of children in a number of different social situations, role-plays, participating in activities and problem solving, and interacting with child-sized puppets used to introduce concepts or promote engagement in activities. Teachers and parents monitor children's behaviors during the week, and are instructed to reinforce children when they exhibit appropriate social skills. The program is highly structured and manualized. A recent review categorized the Incredible Years child training program as probably efficacious (Eyberg et al., 2008).

Another social-skills training curriculum is the Promoting Alternative Thinking Strategies (PATHS) curriculum that is implemented universally by teachers in schools. PATHS is administered within the context of classroom activities, and it aims to reduce the occurrence of aggressive and negative behavior, and also teaches adaptive social skills and behaviors. The PATHS program was part of the multi-component peer treatment in the Fast Track intervention study for young children with conduct problems (Conduct Problems Prevention Research Group, 1999). A recent randomized controlled trial adapting the PATHS program for a preschool setting has also indicated positive results of the intervention (Domitrovich, Cortes, & Greenberg, 2007).

Bullying/aggression prevention. Bullying behavior is clearly related to the emergence, maintenance, and severity of peer problems, as it has consequences for both the bullies and victims. There is now a collection of approaches supported by outcome data to target and reduce the negative effects of bullying in schools (Olweus, 1993; Pepler, Craig, Ziegler, & Charach, 1994; Ross, Horner, & Stiller, 2008). Most approaches are implemented in school settings, and these approaches share some common characteristics. First, there is a universal prevention and intervention component that involves the creation of school-wide expectations and rules, as well as procedures for monitoring and enforcing the rules across all school settings. Programs also involve strong efforts toward increasing awareness of bullying and its consequences throughout the school. In addition, mechanisms for reporting bullying without fear of retaliation are instituted (e.g., an anonymous reporting system). Finally, most programs utilize a tiered system of universal and targeted interventions. In a recent review that included a consideration of bullying prevention interventions, McMahon, Wells, and Kotler (2006) comprehensively reviewed the bullying prevention and intervention literature and concluded such treatments were an effective intervention, in general. This conclusion was qualified in that the interventions appeared to be more effective for younger children than older children in middle schools.

Peer mediation approaches are also widely used in school settings (Gottfredson & Gottfredson, 2002). These universal interventions to address aggression or conflict in school settings involve training peer "mediators" to intervene in problematic social situations between children. Typically, they use a problem-solving approach to resolve the situation. Cunningham et al. have reported on the outcomes of a peer mediation program (Cunningham et al., 1998). In the study, mediation teams were fifth-grade students, trained for 15 hours. The results suggested that peer mediators resolved 90% of the playground conflicts, and direct observation indicated a reduction in physically aggressive behavior by 51–65%, with sustained effects at 1-year follow-up. This study suggests that peer mediation interventions, like the one implemented by Cunningham et al. are promising interventions. One of the innovative aspects of this approach is the reliance on peers as the change agents (i.e., mediators).

There are also targeted treatments for children who are aggressive or bully others. For example, the Reprogramming Environmental Contingencies for Effective Social Skills Training (RECESS) is a well-developed program that aims to improve the social skills of young children who exhibit aggression or are at-risk for antisocial behaviors (Walker, Hops, & Greenwood, 1993). The program is very carefully manualized and structured, and it involves a number of hierarchical components. First, individual social-skills training that includes discussion and role-play with the targeted student and the entire classroom is conducted. Second, a response cost token economy is implemented where the child loses points for inappropriate social behavior (e.g., aggression) and rule violations (Hops & Walker, 1988). Praise and rewards (classwide and home-based) are contingent on appropriate social behaviors exhibited by the child. The program implements the contingency management approach using four phases. The first phase focuses only on behavior in the recess setting and contingency management is implemented by a para-professional. Once the child exhibits improved behavior, similar interventions are implemented in the classroom. After documented progress in the child's behavior, the para-professional's support is faded, and procedures are turned over to the teacher and other school staff to maintain. Developers of the RECESS program have extensively field-tested and evaluated the program (Walker, Ramsey, & Gresham, 2003), making this an effective intervention for children at-risk for peer problems in elementary school.

15.4   Mechanisms of Change

There is currently no consensus across studies regarding the specific mechanisms that promote change in peer problems from intervention. However, there are some commonalities amongst effective interventions that can be discussed, and these are potential contributors to the change seen due to peer interventions. Each of these components will be briefly discussed.

First, as is clearly apparent from an overall review of effective interventions for peer problems, the use of contingency management strategies based on the principles of social learning theory are a component of all effective interventions. That is, establishing clear expectations, rules, and goals for peer-related behaviors, monitoring the exhibition of appropriate and inappropriate behaviors, and following these behaviors with logical consequences for positive and negative behaviors is an approach that appears to be a necessary ingredient of effective interventions. For example, one might argue that the intensive contingency management approach is what makes participation in an STP an evidence-based treatment for ADHD, whereas simply participating in group recreational activities is not (Pelham et al., 2008). Other programs that address peer problems related to anger or conduct problems (e.g., Lochman et al., 2008) and bullying (e.g., Olweus, 1993) also contain contingency management components. It is likely that contingency management helps to support and correct peer-related behaviors that had not been addressed by naturally occurring contingencies for one reason or another. Of course, one drawback of contingency management approaches is that there appears to be only modest evidence of generalization of treatment effects (e.g., Pelham et al., 2005), suggesting that while these interventions improve peer interactions while implemented, they do not appear to result in sustained change in functioning, necessitating long-standing intervention.

A second commonality across the effective treatments outlined earlier is the emphasis on implementing treatment procedures and facilitating social-skills training in naturalistic peer settings, such as during recreational or school-based activities (e.g., Beidel et al., 2000; Pelham

et al., 2005). The exact mechanism for change related to this approach is not well-studied. However, it is reasonable to presume that a child who practices a new behavior in a context similar to that of the situation where treatment effects are aimed to generalize may be more successful in maintaining appropriate peer-related behaviors. It is clear that substantial treatment effects can be generated by having a child practice targeted social skills in a peer setting immediately prior to participating in a peer-group interaction (O'Callaghan, Reitman, Northup, Hupp, & Murphy, 2003). What is unknown is the extent to which other treatment approaches can be generalized, whether treatment effects are maintained, if effects do not maintain with what speed they decrease, and whether additional supports or interventions (i.e., including a parent-related treatment in parallel) promotes generalization (see Pfiffner & McBurnett, 1997 for an example of this approach).

Although, generally an unaddressed parameter in the treatment literature, all the effective interventions reviewed earlier include intervention *within* a peer group. One potential mechanism for change therefore relates to implementation of treatment procedures with same-age peers. Although the precise mechanism of how this peer-group interaction supports the alleviation of peer problems is unknown, it is likely that the peer group provides an ecologically valid setting for intervention, provides a number of models (both positive and negative) for the child to observe, and may reduce feelings of isolation. Further, one important aspect of treatment in the peer group is that it permits peer interactions to occur in a structured and monitored setting. Deficits in social cognitive strategies are one possible reason for peer problems. The structured setting may permit a buffered situation where mistakes or ill-advised peer-related behaviors may be identified, corrected, and retried so that the child can experience different consequences for peer-related behaviors. An additional area that is in need of further study is whether the peer intervention context can serve as a catalyst for the beginning of a friendship that may be maintained after the treatment has ended (e.g., Hoza, Mrug, Pelham, Greiner, & Gnagy, 2003).

A discussion of the mechanisms for change would also be remiss without an examination of potential mechanisms for negative change that may happen within the context of interventions for peer problems. Recent research has highlighted a potential for iatrogenic negative effects of peer interventions in group settings. Dishion et al. (Dishion, McCord, & Poulin, 1999) define this process as *deviancy training* – the shaping of negative behavior when in the company of other children who reinforce the negative behavior. In a study on conduct problem faced by youth, it was demonstrated that teens reinforced rule-breaking behavior and negative comments through their responses (e.g., laughing, smiling), and as Dishion et al. (1999) reported, the participation in group treatment resulted in more negative outcomes for treated youth (e.g., on measures of smoking during follow-up assessments).

These results spurred an immediate reaction in the professional community, and caused concern regarding the potential harm of group interventions for children. However, further research and analysis has suggested that the original conclusions need to be qualified. First, it is clear that in unstructured treatment settings with poor adult supervision or control, children will engage in considerable deviancy training (Onyango et al., 2003). Importantly, rates of deviancy training (and negative behaviors that can be reinforced through peer attention) decrease dramatically with the use of well-defined structure, rules, expectations, and consequences in the peer-treatment setting. Second, in a comprehensive review and meta-analysis, Weiss et al. (2005) examined the child-treatment literature and found that a child intervention with a peer component was actually *less likely* to have a negative effect size (i.e., a negative effect of

treatment). Thus, although deviancy training may occur, it is less likely to occur in situations where treatment facilitators implement contingency management and monitoring strategies, and across multiple studies on research synthesis, there was little indication that peer affiliation during group treatment was a procedure resulting in a negative outcome.

It is clear that like most mechanisms of treatment effects in child-based interventions, the precise mechanisms of treatment for peer problems (i.e., the mediators of treatment effects) are not well-defined. Certainly, additional work in this area is warranted.

15.5   Basic Competencies of the Clinician

A conceptualization of basic competencies for the clinician should begin in the early training stages for professionals. Given the prominence of peer relationships in development, prediction of long-term outcome, and as a marker of adaptive or impaired functioning, peer relationships are relatively under-represented in clinical and professional training programs. This may be partly due to the lack of a DSM category for peer relationships, as discussed earlier, as well as the heterogeneous nature of peer problems. Regardless, there should be an increased emphasis in training programs on evidence-based approaches to assessing and intervening peer problems. For example, it is now well-documented that child report may be a valid approach for assessing the presence of peer problems in some situations (e.g., whether a child is being bullied; feelings of social anxiety), but not for other situations (e.g., a child with ADHD's self report of friendship quality; Owens et al., 2007). An effective training program would review and evaluate assessment approaches specific to peer problems with regard to instruction related to basic principles of assessment. Furthermore, there is a growing literature of evidence-based interventions for children with peer problems. Training programs should educate future clinicians and professionals on how to implement these treatments that are backed by evidence. In addition, there appears to be no viable justification for the provision of practical experience or training in non-evidence-based approaches (e.g., individual counseling with a child). Thus, programs should actively and critically vet potential sites for students, and have procedures in place for the quality control of clinical training experiences, to ensure that training will be consistent with evidence-based approaches.

Basic competencies of a clinician during assessment activities should be grounded within the principles of functional and applied behavior analysis (e.g., Repp & Horner, 1999) as well as social learning theory. Assessments for peer-related competencies and deficits can start with a clinician clearly defining targeted behaviors to increase or decrease (e.g., teasing), obtaining information regarding the antecedents of the targeted behavior (e.g., being provoked or teased by a peer; the child feeling "left out"), as well as the consequences (e.g., obtaining peer attention, albeit for a negative behavior; reinforcement of a maladaptive peer-related behavior; development of a negative reputation with peers). Because of the complexity of peer-related interactions and the concurrent issues of the questionable veracity of child report in some cases, as well as the possibility of parental or teacher ignorance of the antecedents or consequences of some peer-related behaviors (e.g., Hinshaw & Melnick, 1995; Pepler & Craig, 1995), multiple methods and informants are needed to conduct an effective assessment.

Assessment of peer problems may also require assessment strategies that are different from the standard interview and checklists available for most childhood problems. For example, as was discussed in the assessment section earlier, sociometric measures that ask children in a

classroom to nominate their friends as well as children whom they dislike may be needed for a clinician to understand the topography of peer relationships in a group (see Bierman & Welsh for a review, 1997). Such measures may also be re-administered and can be sensitive to changes due to intervention. Drawbacks of this approach include the difficulty in obtaining consent from schools and non-treatment-related families to permit the collection of sociometric information. The difficulty may be worth negotiating, however, given the modest relationship between parent ratings and child self-report and peer ratings of social standing (especially from children with externalizing disorders; Hinshaw & Melnick, 1995).

Observations of child or adolescent behavior in peer-related situations may also be a required part of an assessment if a clinician is to completely understand the nature of antecedents and consequences of peer-related behaviors (Bierman & Welsh, 1997). Observations may be necessary due to the limitations of the child's self-report and adult report noted earlier. Non-obtrusive observations of child behavior may also be helpful for identifying targets of treatment or maintaining factors (e.g., school records of attendance, tardiness, and school nurse visits for a child with social phobia or who is being bullied; discipline referrals for aggression during recess periods).

One additional comment on assessment is that diagnosis or problem identification is but one among many purposes of assessment. Additional purposes include treatment planning, treatment and progress monitoring, and evaluating outcome (Mash & Hunsley, 2005). By using an applied behavioral analytic framework that identifies areas of competencies and strengths, the operational defines the behaviors in these domains and also works to crystallize the specific antecedents and consequences of each behavior should help to promote continuity across the different purposes of assessments related to peer problems. This approach should also help a clinician to focus on impaired areas of peer functioning, which are the socially valid and clinically meaningful targets of intervention (Fabiano & Pelham, 2009). Further, these areas of impaired functioning lend themselves to meaningful measures of progress monitoring. For instance, many children with impaired social behaviors in school receive special education services to facilitate the remediation of these deficits. Services are defined and target behaviors are operationalized in the child's Individualized Education Program (IEP). These targeted behaviors can be easily modified for use in a daily report card or school-home note, so that a child receives frequent feedback on behavior and importantly, the clinician has a consistent way to monitor progress and evaluate treatment effects. This approach is relatively easy to use (see http://ccf.buffalo.edu for instructions) and preliminary evidence suggests that it may be psychometrically sound (Fabiano, Vujnovic, Naylor, Pariseau, & Robins, 2009; Pelham, Fabiano, & Massetti, 2005). Of course, this approach can be used for a child without an IEP with school-based peer problems as well. Progress monitoring is important for school-wide interventions as well. A good example of this is the peer mediation paper by Cunningham et al. (1998) – follow-up observations of the implementation of the program revealed that one school experienced an increase in aggressive behavior. Upon closer review, it was determined that the school had reduced the number of mediators on the recess playground, resulting in a reduction in the effectiveness of the program. Clear procedures for monitoring progress should help to identify and provide the opportunity to remediate these types of situations.

The preceding discussion of a school-based, progress-monitoring measure of social behavior presumes another basic competency. That is, clinicians must be proficient in working with individuals in the child's natural environment. Progress monitoring, identification and

monitoring of targeted behaviors, intervention strategies, and generalization activities must all occur outside the clinic within the context of peer interactions. For this reason, a basic competency involves coordination of care across agents (e.g., parents, teachers, coaches, child care workers) in all settings where peer problems are observed. This presents a practical barrier for professionals accustomed to working in office settings directly with the child only, but it is notable that none of the evidence-based interventions reviewed earlier included solely clinical contact with the child in the clinic. All included some aspect of school intervention, parent training, or generalization activities in the peer group. Clinics working with children with peer problems must therefore engineer staff schedules and responsibilities to permit time for meeting with teachers at the child's school throughout the duration of assessment and treatment, and have staffing patterns that permit children and parents to receive treatment in parallel to reduce family burden related to treatment. This approach also supposes that a clinician is competent in child-focused, parent-focused, and family-focused evidence-based treatment approaches.

As is clear from the sampling of evidence-based interventions described earlier, clinicians must also be competent in their ability to manage a therapeutic group. For instance, clinicians must be adept at setting clear limits and boundaries during group activities. This would include explaining the concept and consequences of confidentiality for issues discussed in the group, the management of disruptive or off-task behaviors, and ensuring that all participants have an opportunity to contribute during discussions. Effective group facilitators during discussion or instruction activities are also effective in asking open-ended questions and in using reflective listening skills. It is also clearly apparent that a basic competency necessary for clinicians working on peer problems in groups is the ability to integrate intervention components into the context of recreational or other peer-related activities. This requires a clinician to maintain the ongoing activity at a level that is interesting and engaging, while also being sure that treatment ingredients specified in manuals, such as modeling, practice, and contingency management are implemented according to the treatment plan.

A final basic competency for all clinicians working to address peer problems relates to their being proficient in contingency management strategies. If it were as easy as simply telling a child that they should not tease, or should really join the group activity at school, or to just ask the school bully to stop bullying, most clinicians would be out of a job. Evidence-based interventions include contingencies for meeting treatment goals or expectations, as well as for missing treatment targets because children with peer problems are not successfully negotiating interactions within the context of naturally occurring contingencies or instructions. For instance, contingency management strategies may include the intensive, comprehensive STP token economy (Pelham, Fabiano, et al., 2005) or the more clinically based contingency management included in the parent management training component of the Coping Power program (Lochman et al., 2008).

15.6 Expert Competencies for the Clinician

As a clinician becomes proficient in basic competencies, skill development also shifts to a consideration of how one increases the depth, breadth, and complexity of clinical skills related to the treatment of peer problems in applied clinical work. Most of the expert competencies relate to enhancing the skills included in the basic competency section to meet additional treatment

needs or goals. Some of these competencies are reviewed, and examples of how these expert competencies might be used clinically are described.

One expert competency relates to developing supervision skills. The evidence-based treatments for child and adolescent peer-problems are well-manualized and contain multiple components. Notably, most of these components can be effectively implemented by para-professional providers without advanced degrees (i.e., college undergraduates, individuals with bachelor's degrees). In fact, it has been long known that there are few differences in treatment outcome owing to the degree of the professionals implementing the intervention (Kent & O'Leary, 1977). In contrast, what is important is the degree of integrity and fidelity incorporated into the treatment implementation (see expanded discussion later). Thus, as professionals master basic skills in treatment implementation for peer problems, and concurrently advance in the field, it is likely that part of their role will be the supervision of others conducting the interventions for peer problems (i.e., student trainees, interns, other professionals). Although there is a growing realization regarding the need for effective supervision (e.g., Neill, 2006), there is also currently substantial variability in the availability, quality, and frequency of supervision available to clinicians working with children who have problems in peer relationships. An expert competency therefore relates to being an effective supervisor. This involves not only using effective supervision skills, but also strategies. For example, research indicates that supervisors typically spent the least amount of time in activities that are the most effective for supervision (e.g., reviewing audio or videotapes; Ward, 1999). Most peer-problem interventions require multiple staff members (i.e., monitor of the child component, facilitator for the parent portion of treatment, etc.). Given the highly manualized and structured nature of the evidence-based peer-problem interventions reviewed, effective supervision that uses procedures known to be effective is needed.

In addition, expert application of evidence-based treatment is a skill that develops with experience and good supervision. Many excellent manualized programs that are evidence-based for peer problems were reviewed earlier. As a clinician masters the basic skills required to implement a manualized treatment, the focus shifts to expert competencies. This includes the ability to work fluidly within the prescribed treatment, while at the same time, applying the treatment procedures with clinical skill, integrity, and fidelity. As Kendall, Chu, Gifford, Hayes, and Nauta (1998) conceptualized, the manual provides a guide for the parameters of treatment, but it is up to the individual to tailor and individualize the treatment to be clinically meaningful for the client. Expert clinicians can use the strategies outlined in a manualized intervention protocol in an individualized manner, to be maximally effective for a referred client. Many treatment manuals provide explicit information on how to individualize treatment in this way, but it is up to the clinician to do this effectively.

An example of individualizing treatment within the context of a highly structured treatment program comes from the STP (Pelham, Fabiano, et al., 2005; Pelham, Greiner, & Gnagy, 1998). The standard program components include a token economy, individualized daily report card, time-out procedures, and additional contingency management strategies (e.g., contingent praise for appropriate peer-related behaviors). However, there are additional treatment components that can be added as needed. These include group contingency procedures wherein the consequences for an entire group are dependent on the behavior of a child or subset of children in the group, or the group as a whole (Litow & Pumroy, 1975). Group contingencies have been successfully employed in the STP to manage the peer attention directed toward negative behaviors. For instance, some children engage in "class clown"

behaviors during the classroom activities in the STP. These behaviors are disruptive, yet yield an incredible amount of reinforcing peer attention for a child. In these cases, the target child's behavior needs to be treated, but it is also necessary to treat the response of the group as a whole to the child's behavior. In these cases, the class can be informed that a group reward (extra free time; picking a piece of candy from a grab-bag) is made contingent on the target child meeting behavioral goals during the class period. In most cases, peer attention for the child's "clowning" behavior decreases immediately, effectively changing the positive consequence for the negative behavior. When the child meets the goal, it is also very effective to see he/she beam with delight as the class cheers and claps for the successful attainment of the reward. Group contingencies can also be applied to entire groups of children to reduce the occurrence of negative peer behaviors such as tattling, or even disruptive or aggressive behavior in schools (Fabiano et al., 2008; Hops & Walker, 1988).

A more specific expert competency for a clinician targeting peer problems is to work to engage fathers in treatment efforts. Fathers are considerably under-represented in intervention studies (Fabiano, 2007; Phares, 1996). However, fathers contribute to many aspects of their child's development, including the development of emotion regulation, social cognition, and focused attention, and probably because of these factors, appropriate peer relationships (Parke et al., 2002). Further, fathers are most likely to be interacting with or supervising a child during activities where peer interactions are likely to occur (e.g., play, outdoors time; Russell & Russell, 1987). Thus, when targeting the treatment of peer problems, fathers may be a critical agent to include in intervention efforts.

Clinicians can also work to focus evidence-based peer interventions on specific contexts or situations where peer problems are present. For instance, behavioral parent training and the intensive peer-focused STP are evidence-based ADHD treatments (Pelham & Fabiano, 2008). The Coaching Our Acting-Out Children: Heightening Essential Skills (COACHES) program combines these two interventions, and it is an approach intended to promote effective parenting by fathers *and* improved peer relationships for children with disruptive behavior disorders. The COACHES program is an 8-week behavioral parent-training program held for 2 hours each week that includes an evidence-based behavioral parent-training program for fathers (Cunningham, Bremner, & Secord, 1998) and STP soccer skill-building activities and game activities (Pelham, Fabiano, et al., 2005). The COACHES program was created based on the premise that, including a recreational, sports activity within the context of BPT for fathers would increase the palatability of the intervention for fathers as well as provide a forum for improving peer-related behaviors and athletic skills for children, and these two factors together were hypothesized to result in a synergistic treatment effect.

During the first hour, fathers review how to implement effective parenting strategies in a group setting (e.g., using praise, using time out). Concurrently, children practice soccer skill drills with para-professional counselors, to increase competencies in the sports domain (Hupp & Reitman, 1999; Pelham, Fabiano, et al., 2005; Pelham, Greiner, & Gnagy, 1998; Pelham & Hoza, 1996; Pelham et al., 1990). Then, during the second hour, the parent and child groups join together for a soccer game. The soccer game provides a context for the fathers to interact with their children and practice the parenting strategies taught in the classroom (e.g., praise, using effective commands), for the children to practice good social and soccer skills, and for clinicians to provide immediate feedback to the fathers (e.g., Pelham et al., 1998; Reitman, O'Callaghan, & Mitchell, 2005). After each quarter of the game, fathers meet with the COACHES group facilitator, and the group has a brief, 5-min meeting on the playing field.

During the meeting, the facilitator asks the parents to report on observations of the use of the weekly parenting strategy employed successfully during the game (either their own use or use by others), asks them to answer attributional questions similar to those described in the COPE program (Cunningham et al., 1998), and offers a chance for fathers to ask each other for advice on how to handle situations that arose during the game.

The COACHES program compares favorably with the standard parent-training program approaches, but offers some specific benefits. First, children were significantly more likely to drop out of treatment if they were in a typical social-skills group and did not experience father–child interactions in the context of the soccer game (Fabiano et al., 2009). As child and parent satisfaction with treatment are important predictors of persistence with treatment (Kazdin, Holland, & Crowley, 1997), this is an important outcome. Fathers are also highly satisfied with the program, and anecdotally report on treatment evaluation ratings that the COACHES program was the first successful community activity they participated in with their child. This suggests that participation in a highly structured and supported recreational activity with other children and the father may be a good beginning approach to working on improving children's peer problems. Similar approaches of combining evidence-based approaches for a problematic behavior have also yielded promising results (e.g., parent training, teacher training, and a peer-intervention; Webster-Stratton et al., 2001).

Expert clinicians will not only be adept at working with an individual family or groups of children, but will also be able to consult effectively to enact change in systems. Peer relationships, and potential problems, typically occur within the context of a system such as a school, neighborhood, or a recreational activity. In some cases, to effectively change problems in peer relationships, the entire system will have to change. Cunningham et al. (1998) emphasize on the importance of a school-wide embracement of the peer-mediation program that includes endorsement by all individuals in the school from administration to teachers to students, school assemblies to emphasize and kick-off the program, and clear support for the mediators from teachers and other school personnel. The Positive Behavioral Intervention and Support approach (e.g., Sugai & Horner, 2008) as well as anti-bullying programs (e.g., Olweus, 1993; Ross et al., 2008) also require consulting with schools to ensure that a whole-school approach is implemented. Thus, clinicians must be able to successfully attain the support of school personnel across levels of a district (i.e., superintendent, principals, teachers, parents, students), often requiring the time, persistence, and ingenuity to negotiate bureaucratic red tape, a knowledge of the history of past programs targeting social development that failed to maintain, and the need to fit an intervention into existing district priorities. Truly partnering with consumers of interventions is therefore necessary, and an ability to listen and integrate consumer-provided feedback or needs into the framework of an evidence-based intervention is an essential component of effective consulting (see Leff, Costigan, & Power, 2004 for a practical example of this approach for targeting peer-related behaviors on a school playground). Clearly, this is not a simple task, and it is one that will require expert experience as well as adherence to the principles of evidence-based treatment, which can be diverted or can experience drift if not continually monitored (e.g., Gottfredson & Gottfredson, 1998).

A final expert competency worthy of discussion relates to the need to maintain treatment as long as is needed. It is notable that most of the evidence-based treatments discussed are not brief interventions. This makes sense when one considers the complexity of peer interactions – children with peer problems have had possibly years of practice with poor interaction skills,

and it is reasonable to presume they may need just as long to master new skills that are adaptive. This may require clinicians to utilize strategies to maintain motivation and engagement over time. For instance, motivational interviewing strategies (Miller & Rollnick, 2002) may be useful for adolescents with peer problems related to affiliating with negative peers or engaging in behaviors where they do not see the benefits of changing (e.g., using alcohol; Monti et al., 1999). Clinicians should also be cognizant of critical periods throughout development where peer interventions may be particularly important. The Incredible Years Dina Dinosaur program is a good example of an intervention that facilitates the transition to interacting with others in a structured school setting, and the Coping Power program targets the transition to middle school. In addition to maintaining treatment as long as is necessary, experienced clinicians will also build-in expectations for families that peer interventions may need to increase in intensity during critical periods of development.

15.7   Transition from Basic Competence to Expert Competence

Because of the multiple strategies that can be used for treating peer relationships, it is best to think of the development of clinical skills along a continuum of expertise. A conceptualization of skills in this way leads to a discussion of how a clinician may transition from fundamental skills or strategies to more advanced approaches to working with children with peer problems. Strategies that facilitate a therapist's increasing competence will be discussed in the following paragraph.

One straightforward way to obtain increased levels of skill in the area of treating peer problems is through participation in trainings and continuing education opportunities that include instruction on how to implement evidence-based strategies. Professional associations, such as the American Psychological Association, Division 53 Society of Clinical Child and Adolescent Psychology (http://www.clinicalchildpsychology.org), offer conferences aimed toward clinicians which provide expert instruction on evidence-based treatments, including those mentioned in this paper. Similar offerings are conducted by the National Association for School Psychologists (http://nasponline.org) as well as the developers of the interventions reviewed in this paper. These trainings are excellent starting points for learning about effective strategies and making contacts with program developers. It is important to point out that attendance at a single conference or training, however, is unlikely to substantially modify a clinician's practice. Therefore, to truly move from basic to expert competence, it is likely that a clinician will need to view these trainings as an ongoing professional development enterprise. Further, trainings may need to be supplemented by on-site training or supervision on a regular basis to ensure successful implementation of procedures, and integrity and fidelity to intervention components.

Related to training is the issue of treatment adherence, integrity, and fidelity. According to Waltz, Addis, Koerner, and Jacobson (1993), the terms *adherence* and *competence* distinguish between degree of implementation by the treatment agent and the care in which the agent implemented the intervention. As such, *adherence* is referred to as "the extent to which a therapist used interventions and approaches prescribed by the treatment manual" (Waltz et al., 1993, p. 620). *Competence* is referred to as the "level of skill shown by the therapist in delivering the treatment" (Waltz et al., p. 620). Considering the distinction between adherence and competence is especially important when an intervention is implemented by a secondary treatment

agent, such as a para-professional or teacher. For clarity in the current discussion, *adherence* is considered as the degree to which the parent/teacher implements the intervention as intended, while *competence* is considered as the care and skill shown by the parent/teacher in delivering the treatment. Hereafter, the term *treatment integrity* refers to the combination of the essential components, adherence and competence.

Gresham (1989) identified several factors related to treatment integrity. They include: (1) the complexity of the treatment, (2) time required to implement the intervention, (3) resources required for treatment implementation, (4) number of treatment agents required, (5) perceived and actual effectiveness of the intervention, and (6) motivation of the treatment agents. The degree of treatment integrity has been directly related to the complexity of treatment, such that greater complexity results in lower treatment integrity (Yeaton & Sechrest, 1981). For instance, treatments considered more complex usually required more time to implement and resulted in lower integrity, with lack of time being the most cited reason for failure to implement an intervention (Gresham, 1989). Lower levels of treatment integrity were found amongst treatments that required additional materials or resources, beyond what was found in a typical classroom or clinic. Treatments requiring more than one treatment agent were likely to have greater complexity, and were often implemented with less integrity. Treatments perceived to be more effective were implemented with greater integrity than those lacking perceived effectiveness.

Notably, these contributors to lowered treatment integrity (e.g., complexity, intensity, etc.) noted by Gresham (1989) are typical of evidence-based peer interventions. Therefore, clinicians need to have procedures for ensuring treatment integrity and fidelity built-in to intervention efforts as a standard part of the intervention. This may make interventions more costly because they become more staff- and time-intensive, yet, if that is what is necessary to promote effective intervention, the additional cost is warranted. As clinicians transition from basic competencies, where they are likely being evaluated for the integrity of the interventions they implement, to expert competencies, it is probable that they will begin to be in the position to evaluate the integrity of others' interventions aimed at reducing problems in peer relationships.

Perhaps, the clearest distinction between novice and expert clinicians relates to the *fidelity* of the intervention. Fidelity relates to the genuineness, interpersonal style, and ability to form a therapeutic alliance with a client and family. This is much harder to do if a clinician is preoccupied with implementing the "nuts and bolts" of an intervention correctly. Only after the basic strategies of an intervention are mastered can a clinician focus carefully on the fidelity of the intervention. Importantly, it does not appear that the opposite direction of focus makes clinical sense – a clinician who is warm, genuine, and has a strong therapeutic alliance, but does not implement treatment procedures that work, would not be helping the child and family, even if the therapy experience was pleasant for both parties. Therefore, after careful training and experience with an intervention, the clinician should maintain focus on the integrity of the treatment while also expanding focus to their interactional style and engagement strategies.

An additional consideration in the transition from novice to expert relates to the ability to construct idiographic treatment plans that are relevant to the child and family. For instance, an expert clinician would use initial assessment information to gather data on the antecedents, consequences, and setting events of peer problems, use this information to define treatment targets, and tailor the initial intervention to these targets. Expert clinicians would also institute relevant progress-monitoring measures (i.e., daily report card, peer sociometrics) that can be administered throughout the duration of treatment to inform data-based decision-making.

Finally, an expert clinician would coordinate care across agents of change in the home, school, and community settings to ensure a comprehensive approach. With experience, good supervision, adherence to protocols, and integrating consumer feedback into future interventions, clinicians should be successful at refining their clinical approach for treating peer-related behaviors.

15.8   Summary

In this chapter, we have outlined the impact of peer problems across a host of functional domains, described the symptoms and impairments related to peer problems, and provided a brief overview of the assessment methods supported by research. In addition, potential maintenance factors related to peer problems were discussed. Fortunately, given the considerable impairment experienced by children with peer problems in the short and long term, there are evidence-based interventions available for clinicians to implement. Notably, these are often intensive and complicated treatments that need to be implemented with good integrity and fidelity to be effective. Clinicians must work to develop clinical skills that are effective for remediating peer problems.

Establishing positive peer relationships may be one of the most critical developmental milestones for children and adolescents (Parker et al., 2006). Importantly, problems in peer relationships are not circumscribed to a handful of child DSM diagnostic categories, but rather span categories, and may even constitute a referral for treatment as a stand-alone problem. Therefore, clinical skills related to the assessment and treatment of peer problems are needed for all clinicians working with children and families. As outlined in this chapter, the stakes are high for children experiencing problems in peer relationships, and these children cannot afford to participate in interventions that do not work. An approach that integrates evidence-based interventions, consistently over time, in all settings where impairment is present, is what is needed to make a real difference for affected youth and those around them.

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16 Somatoform Disorders and Chronic Pain

Amanda A. Drews · Brenda Bursch

Abstract: Children and adolescents commonly experience physical symptoms that are not readily explained by identifiable medical illness or tissue pathology. Such symptoms can be transient and benign, or they can be persistent, severe, and disabling. Whether or not the symptoms are explained by a medical problem, some children have great difficulty coping with them. Among children that appear more distressed or disabled by physical symptoms than expected, a diagnosis of Somatoform Disorder can be made. There are presently seven identified Somatoform Disorders that can be applied to children, despite the lack of empirical data regarding the appropriateness of such diagnoses in this age group. A large and growing literature on pediatric chronic pain has informed the conceptualization, assessment, and treatment of childhood somatoform disorders. Most clear regarding the current understanding of chronic somatic symptoms is their multifaceted etiological nature and the necessity of interventions to address biological, psychological, and social precipitating and maintaining factors. Important areas of assessment include the nature of the physical symptoms themselves, including their location, duration, quality, variability, and intensity; the social, emotional, physical, cognitive, and academic functioning of the symptomatic child; and, family factors such as parenting style, response to child symptoms, and psychopathology. Frequently employed treatment strategies include medications, individual and/or family cognitive behavioral interventions, and body-based therapies. Ideally, these assessment and treatment methodologies are collaboratively implemented within a biopsychosocial framework by medical and psychological professionals who are familiar with the related research evidence base.

16.1 Overview

Children and adolescents often experience physical symptoms that are not readily explained by identifiable medical illness or tissue pathology (Eminson, 2007). Such symptoms can be transient and benign, or they can be persistent, severe, and disabling. Irrespective of whether or not the symptoms are explained by a medical problem, some children have great difficulty coping with them.

Individuals described by the DSM-IV as having a somatoform disorder are more distressed or disabled than would be expected by one or more physical symptoms or by the misperception of a serious medical problem or deformity. Symptoms are not explained by a known medical disorder and are not intentionally produced. As with many other psychiatric diagnoses, criteria for somatoform disorders were developed for adults, and the bulk of the research has been conducted with this age group. Thus, diagnoses are applied to children without child-specific criteria. There are seven somatoform disorders in DSM-IV: Somatization Disorder, onversion Disorder, Pain Disorder, Hypochondriasis, Body Dysmorphic Disorder, Undifferentiated Somatoform Disorder, and Somatoform Disorder Not Otherwise Specified (NOS). These were

not revised in the DSM-IV-TR. Reclassification of diagnoses reflecting somatic symptom presentations based on developmental stage was attempted in the DSM-PC (Diagnostic and Statistical Manual for Primary Care; Wolraich, Felice, & Drotar, 1996). Working groups are currently in progress for publication of DSM-V, with the expectation that revisions to the somatoform disorder criteria will be made. For the purposes of this chapter, we will use DSM-IV criteria. Additionally, the larger literature on pediatric chronic pain, which has greatly informed conceptualization, evaluation, and treatment of somatoform disorders, is also included in this chapter.

Criteria for *Somatization Disorder* includes several years of physical complaints with at least four pain symptoms, two gastrointestinal symptoms, one sexual symptom, one pseudoneurological symptom, and associated treatment-seeking or disability. Although research in pediatric community samples demonstrates that children and adolescents commonly experience multiple somatic symptoms (Aro, Paronen, & Aro, 1987; Zuckerman, Stevenson, & Bailey, 1987), the formal diagnosis of Somatization Disorder in youth is rare owing to the requirements for manifestation of one sexual symptom and several years of symptom-related disability (Bisht, Sankhyan, Kaushal, Sharma, & Grover, 2008; Lieb, Pfister, Mastaler, & Wittchen, 2000).

Along with excessive distress or functional impairment, criteria for a *Conversion Disorder* includes one or more unexplained neurological symptoms or deficits affecting voluntary motor or sensory function suggesting a neurological condition. Additionally, psychological factors, conflicts, or stressors must be temporally associated with the symptom onset or exacerbation. The subtypes include Motor Symptom or Deficit, Sensory Symptom or Deficit, Seizures or Convulsions, and Mixed Presentation. Lieb et al. (2000), who studied adolescents and young adults, found a lifetime conversion disorder prevalence of 0.4% and a 12-month prevalence of 0.2%. Some pediatric research has been conducted on this topic, identifying symptoms such as non-epileptic seizures, paresis, paresthesia, ataxia, and gait disturbances (Bisht et al., 2008; Grattan-Smith, Fairley, & Procopis, 1988; Leslie, 1988; Plioplys et al., 2007; Spierings, Poels, Sijben, Gabreëls, & Renier, 1990; Thomson & Sills, 1988).

Although psychological factors influence all types of pain, there is a growing literature on pediatric *chronic pain* that has significantly influenced the conceptualization of child somatization overall. This literature also serves as an empirical base that informs the assessment and treatment of both pediatric chronic pain and somatoform disorders. Chronic pain is any type of persistent pain, with or without the presence of associated tissue pathology or inflammation. Some children can function well with chronic pain and others become highly distressed or disabled by it. Examples of chronic pain include burns, cancer, fibromyalgia, headache, juvenile rheumatoid arthritis, myofascial and temporomandibular joint pain, neuropathic pain, phantom pain, complex regional pain syndrome, sickle-cell pain, and visceral pain (American Pain Society, 2001).

Headache and abdominal pain are the most frequently reported types of childhood chronic pain. Population-based studies suggest that recurrent abdominal pain (RAP) is experienced by 10–15% of school-age children (Apley, 1975; Apley & Naish 1958) and about 20% of middle school and high school students (Hyams, Burke, Davis, Rzepski, & Andrulonis, 1996). Among those who report abdominal pain, irritable bowel syndrome (IBS) symptoms are experienced by 8% of the middle school students and 17% of high school students (Hyams et al., 1996). Headaches become more prevalent over the course of childhood, increasing from 8.3% in children 7–10 years old and to 17–20% in those 10–18 years old (Groholt, Stigum, Nordhagen,

& Köhler, 2003). Chronic pain symptoms increase significantly in those with chronic medical conditions. For example, 40–86% of children with arthritis report chronic pain (Lovell & Walco, 1989; Petty et al., 2004; Schanberg, Keefe, Lefebvre, Kredich, & Gil, 1998; Sherry, Wallace, Kelley, Kidder, & Sapp, 1999).

Among a smaller group of children, somatoform *Pain Disorder* is diagnosed when the predominant symptom is unexplained pain that causes distress or impairment and for which "psychological factors are judged to have played a significant role in the onset, severity, exacerbation, or maintenance of the pain." The subtypes include Psychological Factors and both Psychological Factors and a General Medical Condition. The disorder is designated as "acute" if it is present for less than 6 months and "chronic" if persists longer. Lieb et al. (2000) found a lifetime prevalence of 1.7% and a 12-month prevalence of 1.3% for childhood pain disorder.

Hypochondriasis does not require the presence of an unexplained symptom. Rather, it includes 6 months of significant distress or impairment owing to the misinterpretation of bodily symptoms that leads to a preoccupation with unwarranted fears of having a serious disease. Medical evaluations and reassurance do not reduce anxiety. However, excluded are those who meet the criteria for Delusional Disorder, Body Dysmorphic Disorder, or another explanatory anxiety disorder. A qualifier, "with poor insight," is used if the individual does not recognize that his or her health anxiety is excessive or unreasonable. Very little is known about the occurrence of hypochondriasis in children and adolescents. "Hypochondriasis by proxy" may be more likely in pediatric settings, especially among younger children, as parents are almost exclusively involved in appraising their children's physical symptoms and accessing medical care.

Anxiety sensitivity, the tendency to view physical sensations as dangerous, is a related construct that has been recently studied in children. Anxiety sensitivity has been found in adults to be associated with anxiety disorders (Taylor, 1999) and chronic pain (Asmundson, Norton, & Veloso, 1999). Tsao, Meldrum, Kim, and Zeltzer (2007) found that anxiety sensitivity, anxiety symptoms, and anticipatory anxiety, together explained for 62% of the variance in pain intensity reported by children.

Body Dysmorphic Disorder (BDD) is similar to hypochondriasis, in that it does not require the presence of an unexplained symptom. It is defined as the excessive concern and preoccupation with a real or imagined defect in the body appearance, not better explained by an eating disorder, psychotic disorder, or other psychiatric diagnosis. One study identified the mean age of onset for BDD as 16 years, with a range of 4–43 years (Phillips & Diaz, 1997). The community prevalence of BDD in an adolescent community sample was 2.3%, with skin concerns being the most common (Mayville, Katz, Gipson, & Cabral, 1999).

Undifferentiated Somatoform Disorder diagnosis requires 6 months of distress or unexpected functional impairment, along with one or more unexplained physical complaints that do not better fit in the criteria for another somatoform (or other DSM) disorder. Furthermore, *Somatoform Disorder Not Otherwise Specified (NOS)* includes other somatoform disorders that do not meet the criteria for one of the specific disorders.

16.2 Recognition of Symptoms and Their Assessment

Owing to their physical nature, somatic symptoms and concerns in children are typically initially assessed by a pediatric medical provider. If these evaluations do not account for the

entirety or intensity of a child's symptoms and/or the findings do not adequately assuage child and/or parental concerns, then the role of a pediatric psychologist in comprehensively evaluating the symptom picture becomes valuable.

For the assessment and treatment recommendations to make sense, it is often necessary to provide education before, during, and/or after the assessment related to the biopsychosocial model. An introduction to this model will initiate the families' understanding of physical symptoms as the product of a complex interaction of biological, psychological, and social factors. Campo and Fritz (2001) offered the following general guidelines for assessing childhood somatic symptoms: (1) acknowledge the patient's and family members' suffering, (2) explore previous experiences with health care practitioners, (3) investigate fears related to the symptoms, (4) communicate a willingness to suggest further medical assessment if indicated, and avoid excessive tests and procedures if unnecessary, (5) avoid diagnosis by exclusion, and (6) explore the symptom timing, characteristics, and context.

Many patients and families will appreciate discussion about the distressing physical symptoms prior to being questioned about a psychosocial nature. In doing so, it is important to obtain the perspective of the child, parents, and other pertinent family members, who are present for the evaluation, including siblings. A thoughtful discussion of the symptoms and previous medical evaluations may highlight the need for further medical evaluation and reassure the patient and family that their symptom concerns are well understood.

It is important to assess alexithymia before asking questions related to emotional functioning (De Gucht & Heiser, 2003). Most children are capable of assessing their ability to readily identify and express their emotions. Those without this ability, on the other hand, may describe that when something distressing occurs, their emotions get confused with one another, they simply feel overwhelmed, or they do not have an emotional reaction at all. Such children may have an easier time identifying the physical symptoms of depression, anxiety, or other feeling states than the affective or cognitive aspects of them.

In addition to gaining an understanding of the specific nature of the somatic symptoms, an evaluation of the psychosocial factors assumed to be triggering, exacerbating, reinforcing, and/or maintaining the symptoms should also be conducted. Other possible contributing co-morbid problems to be assessed include: anxiety, depression, sleep disturbance, known or unsuspected learning disorders (even in high achieving children), poor coping skills, a vulnerable temperament, cognitive, developmental or communication disorders, social problems, physical or emotional trauma, family illness, and/or prominent family distress (Bursch, Ingman, Vitti, Hyman, & Zeltzer, 2004; Bursch & Zeltzer, 2002; Campo, Comer, Jansen-McWilliams, Gardner, & Kelleher, 2002; Campo, Jansen-McWilliams, Comer, & Kelleher, 1999; Egger, Angold, & Costello,1998; Eminson, 2007; Fritz, Fritsch, & Hagino, 1997; Garber, Zeman, & Walker, 1990; Hodges, Kline, Barbero, & Flanery, 1985; Hodges, Kline, Barbero, & Woodruff, 1985; Hyman et al., 2002; Lester, Stein, & Bursch, 2003; Livingston, 1993; Livingston, Witt, & Smith, 1995; Salpekar et al., 2008; Schanberg et al., 1998; Stuart & Noyes, 1999; Zuckerman et al., 1987). ◗ Table 16.1 presents a list of clinical assessment topics.

Among those children who are not attending school, psychoeducational testing may be needed to identify problems that are difficult to assess through interview alone. Such testing should be considered if the child is academically behind, has peer problems including poor social problem-solving skills, or has high overall achievement with a pronounced difficulty in a particular area. Children in this latter group may be working extremely hard to maintain high (or perfect) grades, in spite of an unsuspected learning disorder.

In cases of non-epileptic seizures (NES), stereotypic motor presentations often differ considerably from true motor seizures, but can be difficult to differentiate when relying exclusively on the history or routine electroencephalography (EEG) data. Video EEG can be used in the hospital to evaluate confirmed episodes (Cohen, Howard, & Bongar, 1992; Duchowny, Resnick, Deray, & Alvarez, 1988), and "postictal" elevations in serum prolactin levels can be measured 10–20 min after a suspected event (Chen, So, & Fisher, 2005; Fisher, Chan, Bare, & Lesser, 1991). Pediatric psychologists are sometimes called upon to aid in the video EEG evaluation, because

◘ **Table 16.1**

Clinical assessment topics

Current Symptoms • Location, quality, intensity, duration, variability, predictability, and types of symptoms under differing circumstances • Exacerbating and alleviating factors • Other associated sensations/symptoms • Past evaluations, treatment attempts, home remedies, alternative/complementary therapies • Ability to self-management symptoms • Response to symptoms • Impact of symptoms on daily life, including school, social activities, eating, sleep (onset and maintenance), and, in BDD, checking or grooming behavior **Beliefs about the symptoms** • Etiology • What will and will not help • Dangerousness • Prognosis **Physical functioning** • Basic functioning: walking and eating • Change in participation in P.E., sports, exercise, social outings, school, chores, homework, ADLs, driving **Social functioning** • Changes in social functioning • Satisfaction with social life • Contact with and types of friends • Types of activities with friends **Cognitive/developmental functioning** • Tendency to approach or avoid a problem or challenge • Few friends or "friends with everyone" • Impaired social behaviors • Unusual interests, worries, habits or hobbies	• Early developmental delays • Sensory hyper- or hypo-sensitivities **Emotional functioning** • Alexithymia • Cognitive vs. somatic symptoms of anxiety • Worry, nervousness, fears, general anxiety, perfectionism, test anxiety, panic, excessive concerns about safety, separation, germs, competence, health, symptoms, routines/rituals, and/or symmetry; tendency to catastrophize • Trauma (including prematurity and medical procedures), grief, changes • Depression, suicidality **Family factors** • Parental coping, anxiety, depression • Parental illness, pain, or disability • Parental understanding of pain • Marital distress, problems in co-parenting, substance abuse, domestic violence • Discipline styles of parents • Problems with siblings or others at home **Medical history** • Time spent in NICU, procedures, injuries, trauma, other illnesses, sensory overload, opioid use, other medication use **Co-morbid symptoms** • Sensory sensitivity • Sleep disturbance, fatigue • Nausea, decreased appetite, fear of eating, conditioned aversions, vomiting • Panic symptoms (with/without panic): heart pounding, sweating, shaking, SOB, choking, lump in throat, chest pain, nausea, dizziness, numbness/tingling, chills/hot flashes

(continued)

● Table 16.1 **(Continued)**

Symptom consequences	Perceived stressors
• Argue with parents or teachers about school, stay home from school, or switch to home schooling • Parent stays home from work, quits working, or does not return to work • Parents get along better or argue more • Child exempt from chores or homework • Parent more sympathetic to child or more upset with child	• School • Peers • Parents • Other relatives • Siblings • Living arrangements • Health • Extra-curricular activities
Academic functioning	**Major life events**
• Perfectionism and/or near perfect grades • Heavy workload and/or advanced classes • Learning disorders or subjects that are more challenging or aversive to the child • Problems with handwriting, homework, tests • Changes in school or classroom • Bullies, relational aggression, isolation • Problems with teachers • Problems with athletic ability	• Starting new school • Move to new house • Parent remarried • Birth of sibling • Learning to drive • Menstruation • Important birthday • Death and/or illness of family member • Death of a pet

motor NES can sometimes be triggered with verbal encouragement or hypnosis techniques (Martínez-Taboas, 2002; Zalsman, Dror, & Gadoth, 2002). Visualization of a typical event is paired with suggestion that such an event will occur. Parents are asked to confirm whether the induced event appears to be representative of the child's typical events. Contraindications of this technique include patient or a family opposition, psychotic symptoms, or a history of sexual or physical abuse (Olness & Kohen, 1996).

Those with BDD often spend a substantial amount of their time engaging in behaviors related to the imaged defect. Assessment of suspected BDD should include queries regarding frequent or unusual means of checking on the defect, grooming behavior, efforts to disguise the defect, avoidance behaviors, social comparisons, and wishes for cosmetic surgeries.

Identification of specific symptoms, their typical precipitants and reinforcers, psychosocial stressors, and co-morbidities allow for feedback that makes sense to the child and parents, particularly, when subsequent treatment recommendations are closely linked to assessment findings. For example, a homebound child with tension headaches, perfectionistic traits, and a bully at school may be anxious about maintaining his straight As and avoiding his aggressor. The effort required for him to maintain his grades might be excessive owing to an unrecognized math disorder. His parents, who feared he might have a brain tumor, may have inadvertently exacerbated his anxiety and muscle tension. This type of comprehensive evaluation provides multiple targets for intervention to improve the functioning of the child and potentially decrease headaches.

16.3   Maintenance Factors of the Disorder or Problem

Consistent with the idea that somatoform and chronic pain symptoms result from a complex interaction of biological, psychological, and social factors, is the notion that symptoms are

maintained by these same factors. At the risk of creating artificial boundaries between these factors, the following will review the biological, psychological, and social factors implicated in the perpetuation of chronic somatic symptoms in children. A biological tendency toward heightened responses to stimuli or chronically elevated levels of stress hormones, for example, have become central to the understanding of what puts children biologically at the risk for ongoing and debilitating somatic symptoms. Psychological factors, such as attention, attributions and beliefs, and coping style will also be reviewed. And finally, as children and adolescents with chronic somatic complaints are situated within a social context – within families, classrooms, and peer groups – it is important to understand the role the social environment might play in the persistence of disability among these youngsters.

16.3.1 Biological Factors

Increasingly, biological mechanisms other than structural pathology are being explored as potentially important factors in the maintenance of chronic somatic symptoms. Sensitization, the tendency to have a heightened response to stimuli because of prior experience of them (Deary, Chalder, & Sharpe, 2007), is one such mechanism. Children who have endured early exposures to pain or other physical insults may experience a reduced threshold for subsequent future noxious physical stimulation, and thus, exhibit heightened physiological and behavioral responses. Somatic hypervigilance and/or the effects of anxiety, depression, or stress, may tax the already-sensitized pathways, lowering the threshold for stimulation even further (Rygh et al., 2005).

The down regulation of the hypothalamic-pituitary-adrenal (HPA) axis in the context of chronic stress and illness is yet another biological factor implicated in the maintenance of somatic symptoms (Deary et al., 2007). The HPA axis controls the body's hormonal response to acute and chronic stress. Under chronically stressful circumstances, the cortisol production has been found to slow, leading to pain, fatigue, and stress sensitivity. These, in turn, are thought to precipitate the "illness response" characterized by lethargy and behavioral avoidance (Fries, Hesse, Hellhammer, & Hellhammer, 2005). Supporting this conceptualization of the role of the HPA axis in the maintenance of somatic symptoms are findings that low levels of cortisol are found in patients with chronic somatic symptoms (Griep, Boersman, Lentjes, Prins van der Korst, & de Kloet, 1998; Roberts, Wessely, Chalder, Papadopoulus, & Cleare, 2004). The automatic biological tendency to "over respond" to physical stressors owing to sensitization combined with the down regulation of the HPA axis represents the seemingly viable mechanisms in the maintenance of somatic symptoms and their associated impairment.

16.3.2 Psychological Factors

Attention. The overwhelming majority of the ongoing physical sensations experienced by the body are processed outside the conscious awareness. However, for those with chronic somatic complaints, the physical sensations are recognized and attended to with more facility than by individuals without these complaints. Considerable work has been carried out in this area (e.g., Brown, 2004; Rief & Barsky, 2005; Ursin, 2005) and researchers have generally concluded that orienting toward a sensation or symptom heightens the perception of it, while not attending to it decreases its salience. Such attentional processes work closely with the

aforementioned process of sensitization. Among those with somatoform disorders and chronic pain, somatic symptoms are generally perceived as aversive, to-be-feared stimuli. Selective attention is therefore directed to the symptoms and the negative thoughts and feelings associated with them. Thus, a cognitive bias for symptoms develops and further sensitizes "the neural loops supporting the cognitive rumination…[P]ain and illness lead to more pain and illness" (Ursin, 2005, p. 1063).

Attributions and beliefs. Attribution is also closely related to the psychological processes of sensitization and attention. Individuals who perceive themselves as more vulnerable, or a symptom as more threatening, are more likely to pay attention to the symptom (Deary et al., 2007). Beliefs about the severity of one's condition, its dangerousness, and the likelihood of amelioration have also been linked to the maintenance of chronic somatic symptoms. Konijnenberg et al. (2005) examined the health beliefs of 149 children who presented medically unexplained pain. Children's beliefs that their health is poor and likely to get worse were independently predictive of having significant impairment in multiple domains of functioning, including activity, school, social, and sleep. In a similar study, an exaggerated and fearful appraisal of pain and its consequences significantly predicted pain severity, somatic complaints, and pain-related disability in school-age children with and without pain complaints (Vervoort, Goubert, Eccleston, Bijttebier, & Crombez, 2006).

Coping style. The manner in which a child or adolescent copes with the physical and emotional aspects of having a somatoform disorder or chronic pain has been linked to the chronicity and impact of the symptoms. Walker, Smith, Garber, and Claar (2005) examined children's reports of coping with RAP symptoms. They reported that passive coping (i.e., a tendency toward neither changing nor adapting to the immediate situation) was strongly associated with increased levels of somatic and depressive symptoms. Accommodative coping responses (i.e., attempts to adapt to the immediate situation) were related to decreased levels of pain, and active coping responses (i.e., attempts to change the immediate situation) were related to increased physical and decreased depressive symptoms. These findings were extended in the study by Walker, Smith, Garber, and Claar (2007) where children with abdominal pain, when compared with the normal children, were determined to be less confident of their ability to change or adapt to stress and were less likely to use accommodative coping strategies. The tendency to avoid using accommodative coping strategies was significantly related to somatic symptoms and functional disability. Similarly, Rocha and Prkachin (2007) demonstrated, in a community sample of children, that the tendency to exhibit less adaptable behavior was related to children's reports of somatization and maternal reports of health care utilization and psychosocial health status.

16.3.3 Social Factors

Parents' own physical and mental health complaints are associated with greater levels of pain and other physical symptoms reported in their children (e.g., Blount, Morris, Cheng, Campbell, & Brown, 2004; Craig, Boardman, Mills, Daly-Jones, & Drake, 1993; Craig, Cox, & Klein, 2002; Hotopf, 2002; Walker, Garber, & Greene, 1994; Walker & Greene, 1989). Hotopf (2003) hypothesized that childhood experience of parental illness could be a risk factor for the development of medically unexplained symptoms owing to vicariously learned illness behavior. Examining this hypothesis, Marshall, Jones, Ramchandani, Stein, and Bass (2007) compared the health

beliefs in children of parents with a diagnosed somatoform disorders and a control group comprising children of parents with an identified physical illness. The children in the former group scored higher on bodily preoccupations and disease phobia when compared with those in the control condition. Perhaps, the most interesting observation was that the pattern of the differences between the two child groups reflected the self-reported differences in health beliefs of the parents in each group.

There is also growing evidence that parents of children with chronic somatic complaints respond to symptoms with increased attention and special privileges (Muris & Meesters, 2004; Walker, Garber, & Greene, 1993; Walker & Zeman, 1992), and that these parental behaviors are linked to the ongoing child somatization (Muris & Meesters, 2004; Walker et al., 2006). Walker, Claar, and Garber (2002) evaluated the role of social consequences (i.e., positive attention, negative attention, activity restriction, and privileges) on the maintenance of children's abdominal pain symptoms. Both positive attention and activity restriction predicted symptom maintenance, but the effect was moderated by children's perceived self-worth and academic competence. That is, if the children positively rated their self-worth and academic competence, the impact of parental attention and activity restriction on RAP-symptom maintenance was lessened. In 2006, Walker et al. evaluated the impact of parent attention and distraction behaviors on symptom complaints by children with and without chronic functional abdominal pain undergoing a pain-producing lab task. The symptom complaints by all the children nearly doubled in the "attention" condition and were reduced by half in the "distraction" condition. Girls with functional abdominal pain were especially vulnerable to parental attention behaviors. Interestingly, children reported that they felt better when their parents used distraction and worse when they used attention behaviors to help them cope. Parent behavior has been found to account for up to 55% of variance in child distress behavior (Frank, Blount, Smith, Manimala, & Martin, 1995). These findings point to the critical importance of educating parents about the effective responses to children's symptoms, as well as directly targeting the affected child's coping repertoire as part of a comprehensive intervention.

16.4 Evidence-Based Treatment Approaches and Their Mechanisms of Change

Ideally, interventions for childhood somatoform disorders and chronic pain are derived from a biopsychosocial model and are collaboratively implemented by medical and psychological professionals. Regardless of the diagnosis, taking a family's fears and beliefs seriously, offering an explanation of how both biological and psychosocial factors are involved in the expression of pain and other somatic symptoms, and adopting a rehabilitative approach to treatment are crucial (Eminson, 2007).

Despite the fact that chronic somatic symptoms are commonly brought to the attention of child and adolescent healthcare providers, there is a dearth of clinical treatment trials for somatoform disorders. The emerging empirical literature on the treatment of childhood chronic pain is comparably vast and thought to be applicable to many of the somatoform disorders. What follows is a brief review of the psychological/behavioral, physical/body-based, and medication treatments and their associated mechanisms of action that have been evaluated for use in children with various and persistent somatic symptoms.

16.5 Psychological/Behavioral Treatments and Their Mechanisms of Change

Psychological and behavioral interventions have a direct effect on a child's symptoms and promote children's sense of self-efficacy by improving their ability to manage symptoms on their own. For these interventions to be most effective, parents and children may need an initial and ongoing explanation of the manner in which psychological techniques alter the physiological function and thereby provide symptom relief. Psychological/behavioral treatments have traditionally been cognitive-behavioral in nature and typically include modalities such as family and parenting interventions as well as individual therapy. Symptom self-management training can include specific strategies, such as relaxation, distraction, hypnotherapy and guided imagery, and biofeedback. These treatment strategies can work synergistically with medications and sometimes be sufficient to address symptoms, allowing children to avoid medications and their possible side effects completely. Expertise with the techniques requires training and practice.

There is an overall lack of high-quality evidence for psychological and behavioral treatments for adults with somatoform disorders (Ruddy & House, 2005) and none for youth. However, there are two exceptions. Efficacy has been established via meta-analysis for adults with body dysmorphic disorder (Williams, Hadjistavropoulo, & Sharpe, 2006) and hypochondriasis (Thomson & Page, 2007). Additional research on the long-term outcomes of psychological and behavioral treatments for both of these conditions is needed.

Stronger empirical support exists for the use of such treatments with childhood chronic pain, including functional abdominal pain, irritable bowel syndrome, headaches, and burn pain (Damen et al., 2006; Duarte et al., 2006, Finney, Lemanek, Cataldo, Katz, & Fuqua, 1989; Hicks, von Baeyer, & McGrath, 2006; Hoffman et al., 2008; Humphreys & Gevirtz, 2000; Robins, Smith, Glutting, & Bishop, 2005; Sanders, Shepherd, Cleghorn, & Woolford, 1994; Trautmann, Lackschewitz, & Kröner-Herwig, 2006; Vlieger, Menko-Frankenhuis, Wolfkamp, Tromp, & Benninga, 2007; Weydert et al., 2006). Preliminary research is promising for children with cancer pain, sickle cell anemia pain, complex regional pain syndrome, and arthritis pain (Lee et al., 2002; Walco, Sterling, Conte, & Engel, 1999; Wilder, 2006). For this reason, this literature serves as a model for the treatment of children with less-studied somatoform disorders.

While psychological and behavioral interventions have the strongest empirical support among the existing treatment options, the interpretation of this literature is complicated by the fact that intervention modalities and specific strategies are frequently implemented in combination with one another (e.g., psychoeducation with individual therapy and parental support). Most existing research has not been designed to identify the most "active ingredient(s)" of an intervention package. Future studies would benefit from dismantling combination treatment packages to isolate and identify the most efficacious treatment components. Additionally, studies directly comparing the psychological and behavioral treatments with medications are needed.

What follows are brief descriptions of the often overlapping psychological and behavioral interventions. Although some of the included psychological and behavioral interventions are often used by other disciplines and could also be considered "physical/body-based," all of those described in this section are potentially within the scope of a trained clinical psychologist.

Family and parenting interventions. Family-based treatment approaches are used to facilitate the acceptance of a rehabilitation approach to treatment, teach parents strategies to help them better tolerate their own and their children's distress, alter family-patterns thought to maintain and/or exacerbate symptoms, and to develop behavioral plans that support children's self-management of symptoms and independent functioning. Modification of environmental contingencies can attenuate reinforcement for behavioral expressions of somatic symptoms (e.g., avoidance of activity, increase symptom monitoring, guarded movements) – behaviors that can lead to increased distress and disability. For example, frequently monitoring a child's symptoms or regularly asking a child about the symptoms reinforces his or her attention and focus on the symptoms. In these cases, it is helpful to teach parents how to briefly acknowledge their child's symptoms (if the child raises the topic) and then encourage the child's use of distraction or other active coping strategies. It is also beneficial to work with medical professionals to ensure that parents understand how to differentiate symptoms of their child that require rest, or further medical work up from those associated with an expected flare that could be exacerbated by rest or further medical work up. Involving parents in the treatment of pediatric chronic pain has been shown to be helpful in maintaining treatment gains (Chambers, 2003).

For example, Sanders et al. (1994) compared a cognitive-behavioral family intervention (CBFI) to standard pediatric care (SPC) in children with RAP. Content of the family sessions included an explanation of RAP along with a rationale for pain-management procedures, contingency management training for parents, and self-management training for children. Children in the CBFI group had higher rates of pain elimination at post-treatment and 6-month follow-up, with fewer child- and parent-reported relapses at 6- and 12-month follow-up and less pain-related impairment in functioning at the 12-month follow-up.

Effects of family interventions can be immediate. For example, Duarte et al. (2006) evaluated a similar CBFI for children with RAP and reported that by the second session, children receiving the family intervention reported significantly fewer pain crises than those in the control condition.

Individual therapy. General goals of individual psychotherapy involve the reduction of somatic and co-morbid psychological symptoms and their associated impairment. Cognitive-behavioral therapy (CBT) achieves these goals by modifying inaccurate and/or unhelpful cognitions and beliefs, self-monitoring symptom triggers, improving adaptive coping ability, encouraging graduated exposure to previously avoided activities, and learning symptom self-management skills. Among other benefits, self-management strategies such as relaxation, distraction, hypnotherapy, guided imagery, and biofeedback can induce a relaxation response. Induction of the relaxation response triggers reductions in heart rate, respiratory rate, blood pressure, and muscle tension, improved gastrointestinal functioning, normalization of stress hormones, and improved mood (Kutz, Borysenko, & Benson, 1985; Lea et al., 2003; McMillin, Richards, Mein, & Nelson, 1999; NIH, 1996; Prior, Colgan, & Whorwell, 1990; Whorwell, Houghton, Taylor, & Maxton, 1992).

For example, Hicks et al. (2006) compared a CBT intervention, adapted for the internet, to a waitlist control for children with recurrent pediatric headache and RAP. Although there was a parental support component to the intervention, the main elements of the internet treatment were focused on the child. The content included education on recurrent pediatric pain, relaxation techniques, physical pain management, the importance of social and school functioning, and cognitive strategies. During follow-up, significantly more participants in the treatment

group were rated as being improved, defined by a 50% reduction in reported pain, than the control condition.

Relaxation techniques. Relaxation techniques (e.g., progressive muscle relaxation and controlled breathing) have been shown to decrease somatic symptoms and alter pain perception by inducing a relaxation response. The following are the examples of commonly used relaxation methods:

– *Tension-relaxation method*: The child is guided to contract the muscles in specific muscle groups for 5–10 s and then relax them. Normally, this will start at one end of the body and progress to the other end (e.g., from head to feet). This technique can be combined with suggestions of relaxation, heaviness, warmth, and images of relaxing situations.
– *Suggestion method*: The child is given repeated suggestions of calmness, relaxation, heaviness, and warmth combined with pleasant imagery, but without instructions to tense the muscles.
– *Differential relaxation method*: The child is guided to relax one part of the body while maintaining tension in the other part. This technique is used to allow the child to continue functioning, while also self-managing a symptom. For example, in the treatment of headaches, the child is guided to relax the jaw and shoulders, but to simultaneously keep the tension in the arms and trunk.

Paradoxical reactions and increased anxiety can occur in individuals who experience increased distress while attending to bodily sensations as would be required in the above mentioned relaxation techniques. For this subset, distraction or imagery without body scanning is typically more effective.

Distraction techniques. Distraction is used to shift the attention away from somatic symptoms and has been shown to increase pain tolerance and decrease pain perception. Distraction techniques vary widely, but can include formal interventions like meditation, hypnotherapy/guided imagery, and the use of virtual reality devices. They can also include everyday distracters like games, television, or school. Distracters, such as school, social events, or athletic challenges, can also improve the functioning and decrease distress by helping the child gain mastery over situations they find difficult.

Hypnotherapy and guided imagery. Hypnotherapy and guided imagery are symptom-management strategies that combine an intentional focus on a visual image with deep relaxation to produce a reduction in distress and an improved sense of self-control. Weydert et al. (2006) randomized children with RAP to either a guided imagery group for training in progressive muscle relaxation combined with guided imagery, or to a control condition for training in breathing techniques alone. The results indicated that children in the guided imagery group had a significantly greater decrease in the days with pain and missed activities during the initial month and at 2 months post-intervention, when compared to those in the control condition.

A specific type of hypnotherapy, gut-directed hypnotherapy (HT), has been developed and evaluated for use with digestive disorders. Hypnotherapy of this type involves the conjuring up of a visual image of the digestive system, its structure, and various functions. The efficacy of HT was evaluated in a sample of children with RAP (Vlieger et al., 2007). In the HT condition, the participants received six sessions over a 3-month period. They were introduced to general relaxation and visualization, control of abdominal pain and gut functions, and provided

information on the mind–body connection. The control-group participants received standard medical care and six sessions of supportive therapy. Although the HT and control groups both evidenced significant decreases in both pain intensity and frequency, the HT intervention was significantly more likely to produce a pain "cure."

Biofeedback. Biofeedback is a facilitated relaxation technique that makes use of computer-generated auditory or visual representations of a youngster's physiological state – muscle tension, peripheral skin temperature, and/or respiration rate. The auditory or visual signals provide children with a real-time, concrete indicator of the physiological changes they are able to produce using various relaxation and breathing techniques. Children as young as 6 years of age have successfully used biofeedback. Although biofeedback has most often been evaluated as part of a multi-component treatment package, it has been shown to produce symptom improvement, beyond that of adding fiber to the diet, in a group of children with RAP (Humphreys & Gevirtz, 2000).

16.6 Physical/Body-Based Treatments and Their Mechanisms of Change

Physical/body-based treatments for childhood somatoform disorders and chronic pain may be more familiar to patients and families, given their more logical link to physical symptom complaints. However, children and families may find them difficult to consistently implement owing to their fear of causing injury or exacerbating existing symptoms. These therapies have most commonly been used for chronic pain in children, but could theoretically be beneficial for those with other somatoform disorders who feel equally unable to control their bodies and have become disabled by their symptoms. Like the psychological/behavioral interventions, some body-based approaches (e.g., exercise and yoga) have the additional benefit of promoting self-efficacy through their focus on teaching the child skills that they can use on their own to self-manage symptoms.

When compared to the psychological/behavioral treatments, physical/body-based treatments are far less represented in the empirical literature. Nonetheless, very preliminary work suggests that targeting the body directly, through physical manipulation, stimulation, movement, or massage, may be a worthwhile intervention strategy, and as such, psychologists should be familiar with these approaches so as to be able to make appropriate referrals when needed. What follows is a summary of the existing treatment data on physical therapy, transcutaneous electrical nerve stimulation (TENS), acupuncture, yoga, and massage therapy. The available information calls for randomized controlled research in pediatric samples with chronic somatic symptoms. Expertise with the following techniques requires training and practice with the specific disorder being addressed.

Physical therapy. Physical therapy (PT) is primarily designed to improve the gross and fine motor skills, balance, coordination, and posture, and to increase strength, flexibility, and endurance through physical manipulation, exercise, heat, cold, electrical stimulation, and massage. Promising results from a case series point to possible efficacy of PT for complex regional pain syndrome (Sherry et al., 1999), and a more recent randomized controlled trial demonstrated positive effects of PT for children and adolescents with chronic musculoskeletal pain (Jones, Stratton, Reilly, & Unnithan, 2007). However, the preliminary research is less clear for youth with arthritis (Takken et al., 2008).

Transcutaneous electrical nerve stimulation (TENS). TENS provides electrical stimulation through the skin via electrodes placed around the painful region along the peripheral nerve routes or at the spinal segments. The device generates electrical currents to stimulate large afferent-A nerve fibers to inhibit pain transmission to the spinal cord that typically occurs via the smaller diameter nerve fibers. The child usually feels tingling and vibrating sensations instead of pain. The TENS units may also trigger the release of endogenous opioids. Children and parents are trained to use the TENS so that it can be worn during normal activities at home and school. The TENS has been demonstrated via meta-analysis to be an effective treatment for adult chronic musculoskeletal pain (Johnson & Martinson, 2007), but little research has been made with children. A few controled trials have supported the use of TENS for children experiencing procedural pain (Lander & Fowler-Kerry, 1993) and pediatric dental pain (Baghdadi, 1999; Modaresi, Lindsay, Gould, & Smith, 1996).

Acupuncture. Acupuncture involves the stimulation of various anatomical points on the body using very thin needles to stimulate the hypothesized release of endogenous opioids. Although there have been no controlled trials conducted with children with somatoform or chronic pain disorders, Zeltzer et al. (2002) found that acupuncture is a feasible and acceptable form of treatment for pediatric chronic pain.

Yoga. Yoga combines physical postures, controlled breathing, and meditation or relaxation to promote a sense of energy, relaxation, strength, and flexibility. To date, one controlled trial (Kuttner et al., 2006) has provisionally supported the use of yoga in adolescents with IBS. Participants reported overall improvements in their gastrointestinal symptoms, but no appreciable decrease in their levels of pain.

Massage therapy. Massage therapy involves the manipulation of the muscles and other soft tissues of the body. A recent meta-analysis revealed that one session of massage can reduce state anxiety, blood pressure, and heart rate; multiple sessions have been shown to produce reductions in pain ratings (Moyer, Rounds, & Hannum, 2004). In their controlled study, Field et al. (1997) reported significant pain reduction in children with arthritis who were massaged by their parents for 15 min a day for 30 days.

16.7 Medication Treatments and Their Mechanisms of Change

Patients and families may anticipate the prescription of a medication for the management of chronic somatic symptoms, while others may prefer to avoid medications altogether. Regardless of the expectation, it is important for families: (1) to be reminded that biological, psychological, and social factors interact to produce somatic symptoms, and (2) to have correct information related to the expected benefits and risks associated with medication options. In the case of childhood somatoform and chronic pain disorders, medications may be prescribed for the direct treatment of somatic symptoms and/or for psychological co-morbidities that frequently accompany them. Unfortunately, very little research has been conducted on the use of medications for somatoform disorders and chronic pain in children. In most cases, pediatric medication recommendations have been derived from the adult literature.

In their review of pharmacological treatments for childhood RAP and IBS, the Cochrane Collaboration (Huertas-Ceballos, Logan, Bennett, & Macarthur, 2008) reported on findings from the only three available placebo-controlled trials. They assessed the efficacy of pizotifen, a serotonin agonist (Symon & Russell, 1995), peppermint oil (Kline, Kline, DiPalma, & Barbero,

2001), and famotidine (See, Birnbaum, Schechter, Goldenberg, & Benkov, 2001). The proposed mechanisms of action of these medications have been hypothesized to include: (1) vasoconstriction, inflammation reduction, and serotonin-reuptake inhibition in the case of pizotifen, (2) relaxation of the lower esophageal sphincter, reduction of colon spasm, and relief of symptoms of dyspepsia in the case of peppermint oil (Dalvi, Nadkarni, Pardesi, & Gupta, 1991; Leicester & Hunt, 1982), and (3) inhibition of gastric secretion in the case of famotidine. The collaboration concluded that there is a lack of clear evidence for the effectiveness of these medications and that they should only be considered if simple management is unsuccessful.

❯ Table 16.2 presents a summary of other medications commonly used for chronic pain and somatoform disorders. Given the frequent co-morbidities of anxiety and depression, medications that target these symptoms are overlapping, and thus, are also frequently considered. The exact mechanisms of action are often unknown, but those that are known or hypothesized are included in the table.

It is important for the families to have correct information related to the expected benefits and risks associated with commonly used medications. Psychologists must understand medication treatment approaches to make appropriate referrals and monitor side effects.

16.8   Basic and Expert Competencies of the Clinician

During the last 25 years, basic research on the neurobiology of somatic symptoms, including chronic pain, and clinical trials of psychosocial therapies for somatoform disorders and chronic pain have demonstrated that psychological variables are of fundamental importance in mediating the appraisal and expression of somatic symptoms (IASP, 1997). Consistent with these developments, psychological and behavioral assessment has expanded beyond the evaluation of personality structure and psychiatric co-morbidities. Likewise, psychological service delivery has extended into the context of multi-disciplinary treatment. Mental-health clinicians have been established as critical team members in the multidisciplinary management of somatoform and chronic pain disorders, and thus, the creation of basic and expert clinical competency standards for psychologists serving in these roles is both timely and necessary.

16.8.1 Basic Competencies

Conceptualization and feedback. At the most basic level of competency, clinicians confronting childhood somatoform disorders and chronic pain should utilize a biopsychosocial conceptualization of the problem. Minimally, this will require clinicians to be alert of their own tendencies toward dualistic thinking about the nature of the somatic symptoms and to resist the pressure from others to revert to dualistic thinking. When working with families, this will require avoiding the categorization of symptoms as either a purely mind *or* body problem. Equally important for clinicians in this regard is to be on the lookout – within themselves, medical providers, and families – for conclusions drawn about children's symptoms that imply that they are intentionally producing or exaggerating their symptoms.

Identification. To achieve a basic level of competence, all clinical psychologists should include queries about physical symptoms, medical conditions, and health care-services utilization in their evaluations, regardless of the presenting problem.

◻ **Table 16.2**

Medications commonly used for chronic pain and/or somatoform disorders

Medication/type	Indications/example references	Mechanism of action	Benefits	Side effects/cautions
Acetaminophen Non-opioid analgesic	Mild to moderate pain	Inhibits the cyclooxygenase enzyme pathway in the CNS	Does not cause dependence or depression No GI or anti-platelet effects Not associated with Reye's syndromerespiratory	No anti-inflammatory effect Toxicity from a large dose or cumulative dosing over days is possible Overdoses have resulted in acute liver failure
Nonsteroidal Anti-inflammatory Drugs (NSAIDs) Non-opioid analgesic	Mild to moderate pain Rheumatoid arthritis, dental pain, bone pain, muscle pain, menstrual cramps, headaches, trauma with swelling	Inhibition of the cyclooxygenase and lipoxygenase enzyme pathways, decreasing production of prostaglandins (thromboxanes and leukotriens)	Does not cause dependence or respiratory depression Has anti-inflammatory effects	Rare side effects include GI bleeding, kidney dysfunction, or impaired hemostasis Aspirin has an anticoagulant effect. It is rarely used in children due to concerns about Reye's Syndrome Aspirin contra-indicated in children with a viral illness, including chickenpox or flu
Opioids	Moderate and severe pain, such as acute sickle cell crisis pain and cancer pain	Mimics action of endogenous opioids to inhibit the release of pain neurotransmitters, spinal analgesia	Can be administered via numerous routes Rarely helpful for inflammatory or mechanical/ compressive pain; not useful for chronic headaches	Potential for increased pain sensitivity over time Side effects include decreased GI motility, itching, urinary retention, sedation, respiratory slowing and respiratory arrest Physical dependence occurs within 7 days. After that, a wean may be required to discontinue them

Tricyclic Antidepressants (TCAs) Adjuvant Amitriptyline is the most frequently studied. Others include clomipramine, desipramine, imipramine, and nortriptyline	Peripheral neuropathies, phantom limb pain, fibromyalgia, pain related to the invasion of nerves by tumors, other neuropathic pain, somatoform disorders, pediatric migraine Clomipramine more effective than desipramine for body dysmorphic disorder (Hollander et al., 1999; Volz et al., 2000)	Mechanisms suggested include potentiation of descending inhibitory pathways, increased serotonin availability, endogenous opioid peptide release, and a direct action on opioid receptors Appears to have a direct analgesic effect	Can work synergistically with opioids The effect of TCAs on pain reduction and improved sleep is rapid (3–7 days) at a relatively low dose Can be useful for anxiety and depression Can be useful for co-morbid insomnia and diarrhea	Anticholinergic side effects including dry mouth, constipation, blurred vision, urinary retention, confusion, and delirium Autonomic side effects include orthostatic hypotension, profuse sweating, palpitations, tachycardia, and high blood pressure EKG monitoring needed at baseline and after achieving a therapeutic, dose Imipramine and nortriptyline are reasonable options if amitriptyline causes excessive side effects
Selective Norepinephrine Reuptake Inhibitors (SNRIs) Adjuvant Venlafaxine	Undifferentiated somatoform disorder, multisomatoform disorder,[a] headache, neuropathic pain, fibromyalgia, diabetic peripheral neuropathy, and reflex sympathetic dystrophy (Han et al., 2008; Kroenke et al., 2006)	Inhibits norepinephrine, serotonin, and dopamine reuptake	Fewer side effects than TCAs Can be useful for anxiety and depression	Monitor for suicidal thoughts, clinical worsening, and/or unusual behavior changes, especially during initial treatment phase and after dose changes

(continued)

● **Table 16.2 (Continued)**

Medication/type	Indications/example references	Mechanism of action	Benefits	Side effects/cautions
Selective Serotonin Reuptake Inhibitors (SSRIs) Adjuvant Including citalopram, paroxetine, escitalopram, fluvoxamine, St. John's wart	Somatoform and multisomatoform disorders,[a] pediatric recurrent abdominal pain (Campo et al., 2004; Greeven et al., 2007; Muller, Mannel, Murck, & Rahlfs, 2004; Muller et al., 2008; Noyes et al., 1998; Volz et al., 2002; Williams et al., 2006)	Selectively inhibits serotonin reuptake Appears to have a direct analgesic effect (interaction with the opioid system; Singh, Jain, & Kulkami, 2001)	Fewer side effects than TCAs Can be useful for anxiety and depression	Monitor for suicidal thoughts, clinical worsening, and/or unusual behavior changes, especially during initial treatment phase and after dose changes
Anticonvulsants Adjuvant Including gabapentin, pregabalin, oxcarbazepine, carbamazepine, topiramate	Migraine, diabetic neuropathy, trigeminal neuralgia, postherpetic neuralgia, complex regional pain syndrome, postpolio-myelitis neuropathy, HIV neuropathy, phantom limb pain, multi-somatoform disorder (Garcia-Campayo et al., 2002)	Reduces post-tetanic potentiation; exact mechanism of action for pain unknown	Gabapentin and pregabalin have fewer side effects and less drug interactions than other anticonvulsants, and do not require serum level monitoring Can also be helpful for mood stabilizations	Potential to cause behavioral changes Requires serum-level monitoring (except gabapentin and pregabalin)

Membrane stabilizers Non-opioid analgesic	Lidocaine for mucositis pain, cancer pain and neuropathies Verapamil for migraines and cluster headaches Mexiletine for diabetic neuropathy	Lidocaine and mexiletine are thought to act through a sodium channel-binding mechanism	Used to enhance the efficacy of opioids, antidepressants, anticonvulsants	Mexiletine's common side effects: nausea, vomiting, sedation, confusion, diplopia, and ataxia Lidocaine infusion is stopped if patient has drowsiness, dysarthria, tinnitus, seizures, dysphoria, or dysrhythmias
Alpha-2 adrenergic agonist Adjuvant	Clonidine for diabetic neuropathy and postherapeutic neuralgia Intrathecal clonidine to reduce muscle spasms in patients with spinal cord injuries	Clonidine may work both peripherally and centrally by increasing conduction of potassium	Clonidine is a second line drug, but has advantages such as its transdermal route of administration Its sedative effect may also be advantageous	Side effects include hypotension and sedation Abrupt cessation may cause rebound hypertension and nervousness
Psychostimulants Adjuvant	Methylphenidate and dextroamphetamine for spasmodic torticollis, spastic colon, and headaches	Anti-nociceptive properties that may be mediated by via norepinephrine, serotonin, or dopamine, or by or endogenous opioid mechanisms	Can allow for decrease in opiate dose without reduction in analgesic effect Used to decrease drowsiness caused by sedating medications	Side effects can include activation of the sympathetic nervous system, insomnia, headaches, reduced appetite Potential for abuse

(continued)

● **Table 16.2** (Continued)

Medication/type	Indications/example references	Mechanism of action	Benefits	Side effects/cautions
Antipsychotic Agents Adjuvant	Cancer, arthritis, migraine, neuropathy, and phantom limb pain	The mechanism of action unknown; antagonizes dopamine D2 receptors, serotonin 5-HT2 receptors; may have a local anesthetic action in spinal nerves	Can improve mood and reduce anxiety Also used as second line option for nausea/vomiting	Requires initial CBC with history of low WBC or drug-induced leukopenia/neutropenia, and glucose monitoring with diabetes risk factors Monitor for suicidal thoughts, clinical worsening, and/or unusual behavior changes, especially during initial treatment phase and after dose changes
Anxiolytic Agents Adjuvant	-Benzodiazepines can be useful by reducing co-morbid anxiety, muscle spasm and insomnia -Short-term use can be effective in sickle cell crises	Binds to benzodiazepine receptors; enhances GABA effects	Hydroxyzine can augment opioids in sickle cell crises	Benzodiazepines can cause respiratory depression and physical dependence Benzodiazepines can cause fear, disorientation, and/or paradoxical reactions Anxiolytics alone do not provide analgesia; they can make a child less able to report pain and distress

ªMultisomatoform Disorder (MSD): three or more currently bothersome, medically unexplained physical symptoms, together with a history of somatization for at least 2 years (Kroenke et al., 1997), listed as a subtype of USD in the Primary Care edition of DSM-IV (DSM-IV-PC) (APA, 1995).

Assessment. When evaluating a child with distress or disability related to a physical symptom or defect, a clinician with basic competency skills should know and assess for common somatic-symptom presentations, psychological and social stressors, psychiatric co-morbidities, functional deficits, and presumed symptom precipitants and reinforcers reviewed earlier in the chapter. The identification of psychiatric co-morbidities assumes a basic competence with psychodiagnostic assessment.

Treatment. Another basic competency for clinicians presented with cases of chronic somatic symptoms involves an appreciation for empirical data pointing to CBT's modest, yet consistent success in improving somatic symptoms and disability. Clinicians possessing a basic level of competency ought to have the knowledge of various CBT techniques, such as relaxation, diaphragmatic breathing, guided imagery, activity scheduling, self-monitoring, and contingency management. Their application to somatoform disorders and childhood chronic pain is similar to their application in other childhood psychiatric disorders.

Care coordination, consultation, and referral. Clinicians who possess basic competency must effectively coordinate care and/or refer care to an expert. A child with distressing or disabling somatic symptoms often sees (sometimes multiple) medical care providers and struggles to manage their school responsibilities. Consequently, the psychologist must have the ability and willingness to co-manage interventions with physicians, nurses, teachers, and school principals, as needed.

A basic competency for any clinical psychologist is to know how to access appropriate consultation. This is extremely important for a child with physical symptoms, as consultation may need to be solicited from both physicians and mental health experts.

Finally, the psychologist must appropriately identify the circumstances under which the care of a child should be referred to another professional. Management of patients with somatoform disorders or chronic pain and their families can be highly complicated and time-intensive. Referrals can be made for all or part of the management as appropriate. For example, while a clinician may be competent to conduct appropriate parent training, another may be more suited to teach the child how to use self-hypnosis or biofeedback for symptom management. Likewise, there are times when it is helpful to have one clinician working with the child and another working with the parents, especially if the child is unhappy with behavioral plans being recommended. A referral to another medical or mental-health professional might also be indicated when there is a new symptom or concern that requires investigation by a specialist.

16.8.2 Expert Competencies

Researchers in the area of learning and competence development have characterized *experts* in a field on the basis of their superior knowledge and proficient performance within the relevant domain of experience (Eveleth, 1999; Lajoie, 2003). However, Jones (2008) cautioned that even if psychologists obtain "extensive knowledge on what to do and how to do it, they are not experts. This is because in order to be an expert one must be able to actually do it rather than just know how to do it" (p. 39). Thus, in addition to all the skills of a clinician with a basic level of competence, one at the expert level will possess a consistent and proficient ability to apply such knowledge in a flexible manner to real-world cases. Additionally, it is the responsibility of the expert to stay abreast of research findings related to etiology, assessment, treatment, and controversies in the field.

Conceptualization and feedback. Beyond having a passing familiarity of a biopsychosocial conceptualization of somatic symptoms, an expert clinician in this area must be facile with communication of a biopsychosocial and non-dualistic model of somatic symptoms to patients, families, and other professionals, medical and non-medical alike. As patients and families will not adhere to a treatment plan that does not make sense, it is essential for the expert clinician to effectively explain the problem. For many patients and families, a well-articulated explanation of the problem is the most useful intervention of all. Achieving a balanced, accurate, and consumable description of such disorders is a skill that requires practice and expert knowledge.

Identification and assessment. While a basic level of competence requires a clinician to be familiar with the diagnostic criteria for somatoform disorders of childhood, an expert level of competence would require an individual to be facile with *specific* common somatic symptom presentations (e.g., non-epileptic seizures [NES], pain, fatigue, vocal cord dysfunction) and chronic pain conditions (e.g., complex regional pain syndrome, RAP, chronic headache), as well as with the indicated assessment and treatment strategies for each. An expert clinician in childhood chronic pain disorders should also be familiar with the standardized assessment tools routinely used to evaluate pain symptoms (For a recent review, see Stinson, Yamada, Dickson, Lamba, & Stevens, 2008).

Treatment. An expert clinician should possess specific and detailed knowledge about the appropriate treatment strategy for specific somatoform and chronic pain diagnoses. A clinician expert in the area of NES, for example, should be able to develop, communicate, and implement a treatment plan that supports a child's ability to function at school by providing teachers, school nurses, and classmates with a concrete plan for responding to non-epileptic events that may occur during a school day. Similarly, an expert clinician in the area of childhood RAP should be familiar with the implementation of guided imagery, in general, as well as with that of specific "gut-directed" imagery or hypnotherapy exercises (Vlieger et al., 2007). This will require an understanding of the anatomy and functioning of the gut and the ability to create developmentally appropriate analogies (e.g., a car) for these structures and functions that can be used in "gut-directed" exercises.

Care coordination, consultation, and referral. In addition to the basic competency of communicating with collateral care providers, expert clinicians in childhood somatoform and chronic pain disorders should have the ability to *function within* a multidisciplinary team, often leading such a team. Doing so will require psychologists to be familiar with the general medical milieu, technical jargon, and the medical treatment plan. In addition, expert clinicians should be intimately familiar with the impact of a child's symptoms on school functioning, school officials' expectations for a student's fulfilling of academic requirements, school policy regarding his/her absences from the school, and the process for initiating and/or monitoring a child's need for special education services.

16.9 Transition from Basic to Expert Competence

A frequently replicated finding in the work of scientists interested in the transition from novice to expert is that there is more than one trajectory to competence. Jones (2008) proposed that the pathway to expertise among psychologists involves a "journey of highly motivated, goal-directed behavior that is prompted by a desire to persevere through hard work in the context of significantly relevant experiences" (p. 39). Thus, a primary task for those whose duty is to support the psychologists' transition from the basic to the expert level of competence in a

particular area is the intentional provision of training opportunities that introduce demanding and complex clinical cases. These training opportunities may be found in the form of academic instruction as well as practical clinical experiences.

The International Association for the Study of Pain (IASP) has undertaken the call to develop training guidelines for psychologists seeking to develop a specialty in the area of pain. In their *Curriculum on Pain for Students in Psychology* (IASP, 1997), the IASP ad hoc subcommittee for psychology graduate curricula proposed a series of training objectives considered important for the expert training of psychologists adopting a specialty in pain disorders. They assert that the "curriculum can be considered to form the academic base from which professional competencies can be developed." These objectives can be accessed on their website (see: www.iasp-pain.org). A similar curriculum could be created for childhood somatoform disorders. Moreover, academic objectives could be addressed not only in the context of graduate study, but also in professional and post-graduate coursework, conferences, and seminars.

Beyond academic instruction, those transitioning to an expert level of competence in the area of childhood somatoform disorders and chronic pain will require targeted and sustained clinical experience. Given the symptom presentation of these disorders, the ideal training sites include primary and tertiary medical settings. Exposure to these clinical settings could be introduced as part of the undergraduate and graduate psychology training, as well as in pre-doctoral internship and post-doctoral fellowship training programs. Securing additional clinical experience by establishing professional relationships with existing experts and participating in multi-site supervision groups and clinical research trials are also recommended to move from basic to expert competence.

16.10 Summary

There has been a growing and converging interest across a variety of medical specialties, including gastroenterology, rheumatology, psychiatry, and neurology, in understanding the development of chronic somatic symptoms and their treatment. Most pivotal to this understanding is the intentional reexamination of long-held dualistic distinctions, like those of organic versus psychological causes for symptoms, and a reorientation toward common neurobiological and behavioral mechanisms that operate across childhood somatoform disorders and chronic pain, such as disrupted physiological sensation and modulation, affect regulation, and illness coping (Naliboff, 2007). Thus, clinical psychologists with expert competency in this emerging field are needed to work with children suffering from physical symptom complaints and associated disability and their families.

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Special Topics

17 Pharmacological Adjuncts

*Nirbhay N. Singh · Ashvind N. Singh · Giulio E. Lancioni ·
Angela D. Adkins*

Abstract: Clinical psychologists provide services to children and adolescents who are often on psychoactive medication for psychiatric or neurological disorders, or for challenging behaviors that have not been amenable to psychosocial treatments alone. Regardless of whether clinical psychologists aim to prescribe pharmacological adjuncts or to refer children and adolescents to child psychiatrists for adjunctive pharmacological treatment, it behooves them to have basic competencies in psychopharmacology. The basic competencies that clinical psychologists should know well and utilize in their practice include recognition and assessment of symptoms, developmental course of childhood disorders, protective and risk factors, maintenance factors, principles and practice of evidence-based treatment approaches, cost-effectiveness of various treatments, drug algorithms, and mechanisms of change underlying psychopharmacological interventions. The APA Board of Educational Affairs has identified three levels of training in psychopharmacology for clinical psychologists: Level 1 is a single semester doctoral-level training program focusing on basic psychopharmacology that enables a clinician to provide assessment and treatment services to their patients. Level 2 is a post-doctoral training program focusing on collaboration between clinical psychologists and physicians to provide an integrated psychosocial and psychopharmacological treatment. Level 3 is another post-doctoral training program focusing on psychopharmacology training at the expert level that is prerequisite for prescribing privileges. The knowledge base of psychopharmacology is increasingly scientific, but its practical application with children and adolescents in alleviating psychological distress is an art. Thus, clinical psychologists need to have basic competencies in both the science and art of pharmacological adjuncts.

17.1   Overview

Five years ago, the National Institute of Mental Health (2003) estimated that between 2% and 3% of children in the United States were treated with some type of psychotropic medication. The rates increased dramatically for specific subgroups of children. For example, 52–71% of the children and adolescents[1] with Attention-Deficit Hyperactivity Disorder (ADHD) and about 76% of children with serious emotional disturbance were prescribed psychotropic medications (Connor, Ozbayrak, Harrison, & Melloni, 1998; Ryan, Reid, Gallagher, & Ellis, 2008; Safer & Zito, 2000). Though the evidence-base for the efficacy of psychotropic medications in improving emotional, behavioral, and cognitive functioning of children with psychiatric disorders is increasing (e.g., MTA Cooperative Group, 1999), it is not yet fully established (Singh & Ellis, 1998). However, this has not reduced the use of these medications in the treatment of

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[1] Unless otherwise specified, in this chapter, the terms child and children are used to denote both children and adolescents.

children either in the community or in residential facilities (Landrum, Singh, Nemil, Ellis, & Best, 1995; Ryan et al., 2008; Singh, Landrum, Donatelli, Hampton, & Ellis, 1994). Furthermore, prevalence of psychotropic medication use in children in the United States far exceeds that of any other country (Zito et al., 2008).

Clinical psychologists who provide services to children and adolescents inevitably deal with patients who are on psychoactive medication for psychiatric or neurological disorders, or for challenging behaviors that have not been amenable to psychosocial treatments alone. Irrespective of whether the aim is to prescribe pharmacological adjuncts or to refer children in their care to a child or adolescent psychiatrist for adjunctive pharmacological treatment, it behooves the clinical psychologists to have basic competencies in psychopharmacology. To rephrase William Osler, "psychopharmacology is a science, the practice of which is an art." The knowledge base of psychopharmacology is increasingly scientific, but its practical application with children in alleviating psychological distress is an art. Thus, clinical psychologists need to have basic competencies in both the science and art of pharmacological adjuncts.

In this chapter, we have described the areas that child clinical psychologists should know well and utilize in their practice, including recognition and assessment of symptoms, maintenance factors, principles and practice of evidence-based treatment approaches, and mechanisms underlying psychopharmacological interventions. Then, we have presented two levels of competencies that the child clinical psychologists should possess to enhance their understanding of psychopharmacological interventions for children. We have also presented a third level of competencies for those clinicians who wish to obtain prescription privileges.

17.2 Recognition of Symptoms and Their Assessment

To use pharmacological adjuncts, the clinical psychologist will need to carefully evaluate multiple psychological, physiological, and social parameters that affect the child's functioning. Optimal treatment requires a clear psychiatric diagnosis and baseline measurement of the target symptoms across multiple settings.

17.2.1 Diagnosis

In general, the clinician's goal is to understand the presenting problems or symptoms at the highest level of diagnostic sophistication that can be achieved based on a comprehensive interdisciplinary assessment. There are at least four accepted levels of diagnostic sophistication: (a) *symptomatic*, which includes isolated symptoms (e.g., auditory hallucinations) that provide an indication of a possible diagnosis (e.g., psychotic disorder not otherwise specified); (b) *syndromic*, which includes the constellation of signs and symptoms that have been present for a given time period, and standardized inclusionary and exclusionary criteria can be used to derive a diagnosis (e.g., depression); (c) *pathophysiologic*, which includes structural or biochemical changes that indicate the diagnosis (e.g., an individual presenting with anxiety, depression or manic excitement, weakness, excessive sweating, tremors, and in some cases, disturbances of thought and cognition, may have elevated thyroid function tests that suggest a diagnosis of hyperthyroidism); and (d) *etiologic*, in which the diagnosis is based on known causative factors (Singh, Sabaawi, & Singh, 2004).

With children, most psychiatric diagnoses are at the symptomatic and syndromic levels of sophistication, because we currently do not have a complete understanding of the pathophysiology or etiology of many childhood disorders. Therefore, it is not uncommon to find wide variability in treatment outcomes in children diagnosed with the same syndrome, because they have similar presentations, but substantially different underlying mechanisms. This means that often clinicians treat children's behavioral symptoms or psychiatric disorders without fully appreciating the biological and genetic underpinnings or how these factors transact with their physical, psychosocial, and cultural environments.

17.2.2 Symptoms

Once a firm or provisional diagnosis is made, the clinician determines the specific (or target) symptoms that will be the focus of pharmacological treatment. In some cases, the target symptoms will be a defining characteristic of the disorder, such as delusions or hallucinations for someone with a diagnosis of schizophrenia. In other cases, the target symptoms may arise in the context of the disorder, but they do not necessarily define the disorder. An example would be self- or other-directed aggression in the context of intellectual disabilities or autism. In addition, although the focus may be on a specific psychiatric disorder (e.g., major depression), the symptoms of the disorder targeted for pharmacological treatment may vary depending on the child's symptom profile. Thus, the target symptoms chosen for psychopharmacological treatment are either included in the criteria for the disorder, as defined by the DSM-IV-TR (American Psychiatric Association, 2000) or some other taxonomic classification system (e.g., ICD-10; World Health Organization, 1992), or are related to or exacerbated by the disorder.

The clinician may want to determine the severity (i.e., frequency, intensity, and duration) of all the symptoms, as well as the collateral behaviors that could be the targets of pharmacological treatments. In the absence of formal ratings, the clinicians can usually rate each of the sub-components of severity as mild, moderate, or severe for each possible target symptom. Further refinement may be necessary prior to determining which target symptoms merit the treatment. Thus, it would be clinically prudent to determine the nature of the symptoms, such as context-dependency, possible functions, and maintaining contingencies. For example, if an adolescent with conduct disorder exhibits aggressive behavior only at school, then it indicates site-specific psychosocial intervention rather than pharmacological intervention. Similarly, if the school-based aggressive behavior is further determined to be prevalent only with one specific teacher, then it may indicate a very specific behavioral intervention that focuses on the teacher, the adolescent, or both.

17.2.3 Assessment

A comprehensive baseline assessment is necessary before a child can be considered for pharmacotherapy. Assessment provides the basis for determining the child's psychopathological condition, indications for treatment, and the nature of the proposed treatment. Baseline assessment is necessary for measuring the outcomes of psychosocial and adjunctive pharmacological therapy. It is multidimensional and interdisciplinary, incorporating assessments of the child's symptoms and functioning across multiple domains, as well as an evaluation of his or her

family history and physical and cultural environment. In general, a baseline assessment includes (a) the source of and reason for referral, including the target symptoms that may be the focus of treatment; (b) history of the presenting symptoms; (c) psychiatric history and current mental status; (d) developmental and medical history; (e) family and education/school history; and (f) an evaluation of cultural context of the family (e.g., determining if the family has any specific religious, spiritual, or cultural beliefs that may interact with the child's treatment in general, and psychopharmacological treatment, in particular).

Symptom clusters. Many, if not most, clinicians in the United States use the DSM-IV-TR taxonomic classification system for diagnostic labeling. While helpful in guiding theory, research and practice, each revision of the DSM system has been criticized for its failure to adequately classify the symptoms of real-world children who present with symptom clusters that cut across multiple disorders (Jensen, Knapp, & Mrazek, 2006; Kupfer, First, & Regier, 2002; Watson & Clark, 2006). In addition, determining whether a child meets the symptom criteria for having a disorder is often difficult because the task is based on subjective and impressionistic judgments rather than on well-defined behavioral observations or empirical ratings. Further, heterogeneity within diagnostic categories weakens the utility of the system for deriving treatments at the level of the individual child or adolescent. Thus, it is imperative that the clinician moves beyond the disorder and the specific syndromal criteria for the disorder and assesses the individual symptoms, as well as the symptoms secondary to other disorders.

Symptom assessment. Assessment of specific symptoms can be achieved via different modalities. Clinicians typically use direct, open-ended questions (e.g., What do you feel like when you are sad?) to gain information from the child. Symptom-oriented descriptive interviews have the benefit of building therapeutic alliance, because it gives the child the feeling that the clinician is keenly interested in his or her psychological distress. Of course, the language used must be aligned with the developmental and cognitive functioning level of the child. For example, young children may better understand terms such as "sad" and "not happy," but not "depressed." Other measures may also be used, including structured or semi-structured interviews, checklists, or rating scales, including visual analog scales with young children. Further information can be obtained from mental-health records, school records, and interviews with family members. The essential issues concern the reliability and validity of the data pertaining to the symptoms experienced by the child. Of course, this will vary depending on the nature of the disorder, because it is somewhat more difficult to establish symptom validity with internalizing than externalizing disorders. Once the symptoms are identified, the clinician has a responsibility to determine the severity of the symptoms across multiple settings.

17.3   Maintenance Factors of the Disorder or Problem

Clinicians need a good knowledge of the developmental course of childhood disorders, because it provides information about how the symptoms of specific psychiatric disorders vary across the life span, and how children's individual differences may affect their psychopathological pathways (Singh & Singh, 2001). In addition, it enables clinicians to differentiate normal and psychopathological development in children at various ages and stages, and an appreciation of the patterns of continuity and discontinuity between variations within the normal range and specific childhood disorders. That is, it is not uncommon for children to display normative

as well as abnormal behavioral patterns over time, depending on their biopsychosocial and cultural interactions. For all childhood disorders, it is essential that clinicians have an appreciation of the multiple factors that may be involved in the genesis and maintenance of each disorder or presenting problems. This would entail having the knowledge of risk and protective factors, the child's transactions with layers of ecological contexts, effects of both nature and nurture, and the interplay of the brain, mind, body, and spirit.

There are a large number of factors that either protect and enhance or risk and compromise children's normal developmental processes. Although these protective and risk factors fall along a continuum of possibilities, they have a transactional relationship among themselves as well as with children's developmental processes. That is, it is the balance of the effects of the protective and risk factors that are most obvious in terms of the normal variations in children's behavior or psychopathology. Children who grow up in conditions that are at risk for producing psychological distress and do not experience sustained protective processes are those who end up displaying behavior problems or symptoms of psychiatric disorders.

17.3.1 Protective Factors

At least three sets of protective factors impinge on children's developmental processes, including child, parental, and contextual protective factors. The child protective factors can be general or associated with each developmental stage. For example, general protective factors would include genetic inheritance, personality characteristics, good physical and mental health, above-average intelligence, and a good-natured temperament. Others are important at the given developmental stages; that is, they are mediated by the child's developmental level. For example, lack of feeding and sleeping problems are important protective factors in infancy, and getting along with peers, good communication skills, good academic performance, social skills, and emotional stability are strong protective factors in middle childhood. Critical parental protective factors include secure attachment, parental support of their child during stressful situations, firm rules regarding the expected child behaviors, parental monitoring of the child, consistency rather than chaos at home, supportive extended family, extended family caregiving, stable parental relationship, family religious faith, and well-educated parents (Masten, Best, & Garmezy, 1990; Werner & Smith, 1992). Contextual protective factors may include a positive stable relationship with adults other than parents (e.g., grandparents, teacher, mentor, adult family friend); high socioeconomic status of family (i.e., middle-class or higher); access to physical health, mental health, and social services; parental employment; acceptable housing; family involvement in religious practices; enrollment and positive experiences at good schools; family having adequate financial resources; and living in a safe neighborhood.

17.3.2 Risk Factors

As with protective factors, at least three general groups of conditions create developmental risk for children, including vulnerabilities in the child, inadequate parenting, and socioeconomic and systemic factors. Many biological conditions place children's development at risk, including genetic syndromes (e.g., fragile X, Prader-Willi syndrome, Lesch Nyhan syndrome, Down syndrome), familial risk factors for psychiatric disorders (e.g., ADHD, mood disorders,

schizophrenia), exposure to teratogens in utero (e.g., toxic substances such as alcohol and other drugs, or infectious diseases in the mother), prematurity and low birth weight, anoxia, birth complications, and chronic diseases. Other child vulnerabilities include difficult and behaviorally inhibited temperament or characteristic emotional responses. For example, young children demonstrating higher levels of behavioral inhibition tend to develop anxiety disorders by the time they reach middle childhood (Hirshfield et al., 1992).

There are a number of potential parental risk factors that have long-term consequences for children. Parental risk factors relate not only to parent–child interactions (e.g., maltreatment, lack of warmth, and responsiveness), but also to parental vulnerabilities (e.g., single parenthood in the absence of extended family support, paternal unemployment, family disruption or divorce, low maternal educational status, large family size [four or more children], parental psychopathology, and substance abuse). Parents who are at high risk have reduced ability to mediate or buffer children's stresses during critical developmental periods, thus leaving them more vulnerable to intrinsic and environmental risk factors, and psychopathology. This vulnerability is heightened by age, as younger children are inherently less able to cope with negative life events, such as witnessing domestic violence. For example, preschool children are not only traumatized by witnessing domestic violence, but in the absence of parental buffering of these stresses, they develop emergency coping strategies, such as aggression and emotional numbing that may prove to be maladaptive as the child grows older. When parents are unable to teach their young children adaptive coping strategies, and the family has few protective factors that may overcome the negative effects of the risk factors, it makes the children more vulnerable to later psychopathology.

Community and socioeconomic risk factors also contribute to the well being of children. These risk factors are external to the family, but may have serious outcomes for parents and children. Age of the children is important in terms of effects and consequences of exposure to community risk factors, as younger children need more parental mediation than older children. These risk factors include: poverty; inadequate or lack of access to medical and mental health care, health insurance, and social services; parental unemployment, homelessness, or frequent change of residence and schools; inadequate child care; exposure to racism, discrimination, and community violence; poor schools; exposure to environmental toxins; and dangerous neighborhoods.

Finally, there are transactional developmental variables that increase children's risk for later psychopathology. Young children, especially those under 6 years of age who have not acquired adequate appraisal strategies because of their immature cognitive processing abilities, are more vulnerable to acute or enduring internal or external stressors because of their developmental status. They may not have developed adequate coping mechanisms, and are therefore unable to marshal enough internal or external resources to overcome adversity. Children who appear to have a favorable protective versus risk factors balance may be at risk for psychopathology if life circumstances increase their vulnerability and reduce their coping ability. For example, children in poverty may be resilient enough to withstand the daily hassles of life but may not be able to cope well following the death of a loved one. They are likely to show signs and symptoms of apathy and depression. In other cases, children may learn passive ways of coping with events that occur repeatedly, because they may feel that there is no way out for them. These children exhibit learned helplessness in the face of adversity. For example, children exposed to repeated physical and emotional abuse from an early age often show no emotional responsivity to the events, and later may show signs of dissociation. For these

children, no active coping mechanisms may work, and the stressors are too great to be offset by whatever protective factors available to them.

17.3.3 Maintenance Factors

Maintenance factors are not often explicated in the research and treatment-outcome literature, especially in terms of protective and risk factors for later psychopathology. ADHD provides a good example for a discussion of maintenance factors in this context. Beginning with infant temperament as a predisposing factor for ADHD, the typical age of onset when a clear diagnosis can be made is about 3 years (Smith, Barkley, & Shapiro, 2007). Regardless of the effectiveness of psychosocial and/or psychopharmacological treatments, a majority of children with ADHD do not outgrow its symptoms during adulthood (Nigg, 2006). Toddlers who are temperamental, have high levels of activity, and are thought by their parents to be non-compliant, are at high risk for ADHD by the time they are preschoolers. Although not all toddlers with these characteristics develop the symptoms of ADHD, many who do, seem to share these traits. In general, these toddlers engage in excessive crying in infancy, and have colic, feeding problems, and sleep disturbances. They are difficult to bond with, and their excessive crying, colic, and feeding problems may form the basis of insecure mother–child attachment, and may slowly lead to negative mother–child transactions. The mother–child transactions may become increasingly negative as the infant grows into a toddler, and warm positive interactions may decrease, less positive affection may be shared between the mother and child, and the child may show increasing non-compliance to parental requests. These transactions result in a stressful mother–child relationship, and the child may be engaged in other behaviors that parents perceive to be problematic.

This kind of interactional process takes place until parents (or clinicians) recognize and alter the environmental context so that "normal" development of the child can occur (Sameroff & Fiese, 2000). The interactions between mother and child are bidirectional, and changes in both must occur for the child to proceed along the normal developmental pathways. For example, infants with difficult temperaments have a tendency to develop childhood psychiatric problems, including ADHD (Davies, 2004). Psychosocial intervention at this stage is often aimed at increasing the goodness of the fit between the child's temperament and the mother's parenting style, because a poor fit is likely to increase the maladaptive functioning in the child. Furthermore, a poor fit increases the mother's feelings of anxiety and inadequacy in handling the child, because she sees the child as being demanding and difficult. When intervention produces a better fit, the mother reacts in a more accepting and warm manner, and is reinforced by the infant's responsiveness and more acceptable temperament. Overall, the mother–child transactions take a more positive developmental pathway, and future behavior problems are averted.

Alternatively, if effective psychosocial intervention is not provided, then the child will increasingly exhibit serious problems with attention, overactivity, impulsivity, and non-compliance – behaviors that may eventually meet the syndromal criteria for ADHD. Symptoms of ADHD transact with normal developmental processes and change the developmental pathways for children diagnosed with the disorder. According to parental reports, about a third of the children with hyperactivity had a number of behavior problems even during the first year of life. These behavior problems are thought to be developmental correlates of ADHD, and

include excessive crying, sleep problems, delays in vocalization, feeding problems, and physical anomalies. It is not that these behaviors are evident only in infants who grow up having ADHD, but rather that these behaviors are often more difficult to deal with in infants who grow up having ADHD. For example, "hyperactive" infants do not respond well to the usual parental calming methods of rocking, cuddling, and comforting, and continue to cry for no apparent reasons.

17.4   Evidence-Based Treatment Approaches

The term *evidence-based practice* refers to the informed use of empirically supported treatment approaches in routine patient care. In the context of medicine, this practice has been described as "the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research. By individual clinical experience we mean the proficiency and judgment that individual clinicians acquire through clinical experience and clinical practice" (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996, p. 71). Evidence-based practices enable the clinician to access and utilize empirically proven treatment approaches that match the clinical needs of individual children.

To use evidence-based treatment approaches, clinicians can rely on reviews of the treatment outcome literature, follow consensus panel guidelines, or systematically evaluate the scientific evidence. However, it is highly unlikely that clinicians can stay abreast of the changing architecture of possible treatment approaches when one compares the time required for reading pertinent research with the time that they actually have for the task. For example, over a decade ago, it was estimated that physicians would need to read 19 journal articles a day, 365 days per year to keep abreast of the current literature in general medicine (Davidoff, Haynes, Sackett, & Smith, 1995). Of course, this requirement would be even higher today. Thus, it is not surprising that clinicians rely more on their own experience with a limited number of patients, academic detailing from pharmaceutical representatives, or workshops by experts, than on systematic reviews of the current literature (Greenhalgh, 2001). Further, when personal beliefs and scientific evidence are at odds, clinicians invariably accept their personal beliefs over science (Garb, 1998).

We have discussed general and specific evidence-based practice methodologies that busy clinicians can use to enhance their choice of effective treatments (Singh & Oswald, 2004a–c). Evidence-based practice provides an efficient system for searching the published and unpublished research literature, a structure for organizing and interpreting the data, and critically evaluating treatment outcome literature to derive an effective treatment for individual patients. In addition, it provides the clinician with a framework for evaluating alternative therapies for a given disorder and for applying the results to a specific child with that disorder.

17.4.1 Evidence-Based Practice Methodology

There are several ways by which a clinician can engage in the evidence-based practice process. In general, all of them include the following five steps: (a) define the disorder, (b) search the treatment literature for the evidence, (c) critically evaluate the literature, (d) choose and apply

the therapy, and (e) monitor patient outcome(s). Defining the disorder or a specific problem can be done through individual or team assessments. This first step is essential because it assists the clinician in formulating the question that will be the focus of the second step. The second step is the literature search. The nature of the question formulated in the first step will determine the outcome of the literature search. For example, if the question is too narrow, the clinician may find very little in the treatment literature, and if the question is too broad, too many references may be found. In either case, the clinician may be discouraged from continuing with the evidence-based practice pathway to find the therapy that has the most valid evidence. A well-formulated question will produce the best results. Further, the clinician must be aware of other factors, such as publication bias and the clinician's own bias that may compromise the search.

The third step involves the critical appraisal of the selected literature, a pivotal task in the evidence-based pathway. This requires the clinician to not only critically review the individual studies, but also assess the corpus of the literature relevant to the target question. Individual articles are assessed in terms of standard, step-wise criteria including patient-entry criteria, appropriate assessments, experimental design with valid controls, replicable treatment protocol(s), fidelity of treatment implementation, follow-up, reliability of data collection, appropriate statistical analysis of the results, interpretation of the data, and so forth. If the original question is to be answered via systematic reviews of the topic, then the clinician must exercise the same rigor that would be expected in reviewing the original articles. In the absence of an evidence-based practice approach, the clinician will invariably introduce bias by using just one or two original articles or systematic reviews to select a solution that is not based on a careful, critical evaluation of the research evidence. Given an emphasis on clinical rather than research training of many child clinical psychologists, the critical review and evaluation of the treatment outcome studies are the most demanding steps in this process.

Once the clinician makes a choice of an empirically validated treatment, the fourth step involves implementation at an acceptable fidelity level, and the fifth step involves monitoring the outcome(s) to determine if the desired or expected results are obtained. Of course, other variables should also be monitored to evaluate the changes correlated with the implementation of the therapy, and these can be both intended and unintended effects and either positive or negative in terms of contributing to the patient's overall enhancement of quality of life. Further, if the clinician uses a scientist–practitioner model of clinical practice, then the evaluation of evidence-based practice with individual children can be carried out using single-case experimental designs (Barlow, Nock, & Hersen, 2009). If the monitoring suggests that the child's adherence to the evidence-based clinician recommendations is less than desirable, then the child-specific reminders can be instituted to enhance therapeutic outcomes. A good example of this can be found in the treatment of diabetes mellitus, where a computerized decision-support system based on evidence-based practice provides patient-specific recommendations for the patient and the physician (Hunt, Haynes, Hayward, Pim, & Horsman, 1998). Although this kind of service delivery is yet to be developed in the treatment of children with psychiatric illness, it is a direct outcome of evidence-based practice.

The final step requires the clinician to consider other critical issues related to the selected treatment approach before implementation, including the following (Donald & Muthu, 2001, p. 36):

1. Is the treatment or technique available/affordable?
2. How large is the likely effect?

3. How uncertain are the study results?
4. What are the likely adverse effects of treatment? Are they reversible?
5. Are the patients included in the studies similar to the patient(s) I am dealing with? If not, are the differences great enough to render the evidence useless?
6. Was the study setting similar to my own setting?
7. Will my patient receive the same co-interventions that were used in the study? If not, will it matter?
8. How good was adherence (compliance) in the study? Is adherence likely to be similar in my own practice?
9. Are the outcomes examined in the studies important to me/my patients?
10. What are my patients' preferences regarding the treatment's likely harms and likely benefits?
11. If I apply the evidence inappropriately to my patient, how harmful is it likely to be? Will it be too late to change my mind if I have inappropriately applied the evidence?

17.4.2 Cost Effectiveness of the Selected Treatment

A key issue in evidence-based practice is what the clinician means by effectiveness; that is, how do clinicians decide if a treatment for a specific disorder or condition works? If we take the pharmacological treatment of an adolescent with obsessive-compulsive behaviors as an example, then effectiveness can be defined in a number of specific ways: (a) Is a chosen drug's action pharmacologically effective in inhibiting the physiological mechanisms that are expressed as obsessive-compulsive behaviors? (b) Is the drug clinically effective in controlling the obsessive-compulsive behaviors? (c) Is the drug effective from the adolescent's point of view? (i.e., does it enhance the quality of life of the adolescent being treated), and (d) Is the drug effective in terms of value for money?

A given drug's mechanism of action is often inferred from its clinical impact, because we know so little about its actual mechanism of action. Thus, researchers and drug companies are interested in pharmacological effectiveness, because of their focus on the properties of the drug itself. However, clinicians are interested in clinical effectiveness, because it shows them whether a given drug reduces or controls a given disorder or condition. Patients are interested not only in whether their disease or disorder is reduced or controlled, but are also keen in knowing whether the treatment has enhanced his or her quality of life. That is, does the drug have unintended negative effects ("side-effects") that compromises their functional skills? For example, if the obsessive-compulsive behavior is completely controlled by the drug at a given dose, but its side effects include cognitive dulling and lethargy, the adolescent may conclude that the treatment was not very effective for him or her.

For those interested in health policy or utilization management, effectiveness is defined in terms of cost-benefit relationships. A drug that provides total control but is twice as expensive as another that provides reasonably good control, then the first drug does not represent value for the money, at least for the health care systems (Fraser, 1996; Wickizer & Lesser, 1998). Clearly, factors other than just clinical outcomes determine what is meant by effectiveness and what treatment will be chosen in clinical practice. The clinician's final choice of an empirically validated treatment may be inextricably bound to the overall system of care that provides the framework for financing and delivering such services to children. These are extremely important considerations in the current era of managed health care.

17.4.3 Information on Evidence-Based Treatment Approaches

Clinicians who wish to use a broad range of evidence-based treatment approaches for treating childhood disorders can access multiple sources of information. First, there are reviews of the literature on evidence-based treatment approaches. One of the best sources for pharmacological adjuncts for childhood disorders is the *Child and Adolescent Psychiatric Clinics of North America*, a hybrid of a research journal and a research book (Martin, 2006). Recent issues of this series have included relevant issues on evidence-based practice (Burns & Hoagwood, 2004, 2005), psychopharmacology (Martin & Bostic, 2006), and specific disorders, such as ADHD (Rohde & Faraone, 2008). Furthermore, the *Journal of the American Academy of Child and Adolescent Psychiatry* publishes 10-year reviews of psychopharmacological treatments of childhood disorders, as well as clinical guidelines (Gleason et al., 2007) and special communications (DeVeaugh-Geiss et al., 2006). In addition to psychopharmacology adjuncts, reviews of evidence-based psychotherapies (Goodheart, Kazdin, & Sternberg, 2006; Kazdin & Weisz, 2003) and other treatments (Barrett & Ollendick, 2004) are also available.

Second, specifically with regard to psychopharmacology adjuncts, the American Psychiatric Association (APA) periodically develops Practice Guidelines, which are analogous to evidence-based practices for particular psychiatric disorders, through consensus panels of experts and approved by a vote of the APA Assembly and Board of Trustees (Frances, Docherty, & Kahn, 1996). Furthermore, the APA publishes and periodically updates a compendium of Practice Guidelines on major psychiatric disorders (American Psychiatric Association, 2006). The American Academy of Child and Adolescent Psychiatry publishes Practice Parameters in the *Journal of the American Academy of Child and Adolescent Psychiatry*. These Practice Parameters are designed to assist clinicians in providing high-quality assessment and treatment that is consistent with the best available scientific evidence and clinical consensus. While they describe generally accepted practices, Practice Parameters should not be considered rigorously evidenced-based. In general, Practice Guidelines and Practice Parameters are useful in providing clinicians with a treatment framework in areas where there is limited empirical data to determine evidence-based practices. However, clinicians are reminded that practice guidelines developed by consensus panels or groups of reviewers may be biased in some ways and may also diverge from the research literature (Barlow, 1994; Beutler, Clarkin, & Bongar, 2000).

Third, clinicians have access to treatment algorithms – a formal set of rules and step-by-step approach that can be used to solve a clinical problem. There are several algorithms for the use of psychopharmacology in treating individuals who have psychiatric disorders. The best known of these is the Texas Medication Algorithm Project (TMAP), which provides medication algorithms for treating persons with serious mental illness, including the treatment of schizophrenia, bipolar disorder, and major depression. Expert panels developed these algorithms based on literature reviews, consensus conferences, consumer input, and reviews by academic and non-academic clinicians (Crismon et al., 1999). However, clinicians will be well advised to take a cautious approach, because there has been controversy regarding bias towards certain drugs advocated in published treatment algorithms. This has resulted as a direct outcome of pharmaceutical companies funding the consensus panels that have developed the psychopharmacology treatment algorithms. Further, certain drugs may not be advocated because of cost considerations even though they may have proven to be effective in randomized control trials.

In summary, there are a number of methods available in the research literature that enables clinicians to search for specific treatments that have been empirically validated for

the treatment of specific disorders or conditions. However, the field of child and adolescent psychiatry is relatively juvenile when compared with that of adults, and there is only an emerging research literature on empirically validated treatments. In the absence of data from well-controlled clinical trials, clinicians might utilize other sources of information, such as practice guidelines and expert consensus guidelines, to inform their clinical work. Clinicians should be aware that many practitioners have significant concerns regarding the use of evidence-based approaches in routine clinical care. They point to the fact that evidence-based research is not based on real-world patients, and thus, the treatment approaches may well produce different results in routine clinical practice. There is also the finding that evidence-based approaches do not consider clinicians' tacit knowledge or "knowledge in practice" (Polanyi, 1967). The clinician should perhaps be better advised to engage in *evidence-informed practice* that begins with the particulars of the individual patient, and develops a course of treatment that is informed by empirical evidence. Thus, good evidence forms a part of the discussions with the individual patient about his or her specific treatment.

17.5   Mechanisms of Change Underlying the Intervention

Even with the vast amount of research being undertaken in psychopharmacology and molecular biology, our understanding of the mechanism of change brought about through the use of psychopharmacological agents for treating psychiatric disorders is, at best, incomplete. For example, we know that all clinically effective typical and new generation (atypical) antipsychotics block the central dopamine receptors. The focus of the typical antipsychotics is on the D2 receptors, while the focus of the new generation (atypical) antipsychotics is on the D1, D4, and serotonin (5HT) receptors. Beyond these general findings, implications for a mechanism of action are unclear in terms of a specific antipsychotic drug prescribed for a specific psychiatric symptom for a specific child. Fortunately, clinical psychologists do not necessarily need to have a complete understanding of the mechanism of action of drugs to consider pharmacological adjuncts as part of their treatment regimen for a particular child.

Psychopharmacology is a subspecialty of pharmacology that deals with the chemistry, disposition, actions, and clinical pharmacology of psychotropic drugs. The two most important branches of psychopharmacology that should be of interest to clinicians are pharmacokinetics and pharmacodynamics. Pharmacogenetics, which can be considered as a component of pharmacodynamics, is increasingly viewed as being very important in our understanding of the effects of psychotropic drugs (Singh & Ellis, 1998). When psychotropic drugs are prescribed primarily for psychiatric disorders, they are intended to affect the mental processes of the individual (i.e., to sedate, stimulate, or otherwise change mood, thinking, or behavior).

17.5.1 Pharmacokinetics

Pharmacokinetics describes the time course of drug concentrations and the effects of drugs and their metabolites on the body. Thus, it describes what the body does to a drug.

Pharmacokinetic factors. The most important pharmacokinetic factors that affect time course and the effects of drugs on individuals include the following: (a) *absorption*, which is the process that determines how a drug travels from the site of administration to the site of measurement

(e.g., plasma, whole blood); (b) *first-pass effect*, which is the hepatic extraction of orally administered drugs before they reach the systemic circulation; (c) *distribution*, which indicates how much of a drug is distributed to the various organs or sites of action throughout the body; (d) *steady-state concentration*, which indicates the concentration of the drug when the amount administered is equal to the amount eliminated per unit time; (e) *half-life*, which is the time required for the concentration of the drug in plasma or whole blood to fall by one half; (f) *elimination rate constant*, which is the proportion of the drug in the body that is eliminated per unit time; (g) *clearance*, which provides a measure of elimination of the drug from the body and is calculated by multiplying the amount of drug in the body by the elimination rate constant; (h) *first-order kinetics*, which occurs when the amount of the drug eliminated per unit time is directly proportional to its plasma concentration; and (i) *zero-order kinetics*, which occurs only when a fixed amount of the drug is eliminated per unit time regardless of the plasma concentration. Data on these factors can be used to draw a unique kinetic profile of a given drug.

Steady-state condition. As the name implies, an individual taking prescribed medication on a regular dosage schedule will reach a steady-state condition. In principle, 50% of the eventual steady-state plasma drug concentration is reached in one half-life of the drug, 87.5% in three half-lives, and more than 97% in five half-lives. For example, if a drug has a half-life of 24 h, its steady-state level in an individual can be estimated on days 5 or 6. When a steady-state is reached, the individual's mean plasma drug concentration will remain constant as long as his or her dosing schedule and drug clearance does not change. Physicians often use the mean steady-state drug concentration to predict the likelihood of therapeutic efficacy or adverse effects, such as toxicity (Friedman & Greenblatt, 1986).

Several factors may alter an individual's steady-state condition. For example, unless the prescribed drug is given by continuous intravenous infusion, it is likely that the individual will experience interdose fluctuation in his or her mean plasma drug concentration, because he or she will be on discrete multiple doses. Under these conditions, his or her plasma drug concentration will rise above and fall below the mean steady-state value during each dosage interval. The extent of fluctuation that occurs depends on many factors, including the half-life value and absorption profile of the drug. For example, greater interdose fluctuations occur with drugs that have short half-life value (e.g., stimulants) than those with long half-life values (e.g., antipsychotics). Clinically, this signifies that the daily dosage of drugs with short half-life values may need to be given more frequently in subdivided doses. An alternative is to use sustained release formulation of the same drugs, because their slow absorption profile will reduce the interdose fluctuation in plasma drug concentration.

Many psychotropic drugs have pharmacologically active metabolites that reduce the interdose fluctuation at steady-state, because the active metabolites usually fluctuate less than their parent drug (Caccia & Garattini, 1990). One of the practical implications of such drugs is that the relationship between plasma drug concentration and clinical outcome becomes more complicated, because the levels of both the parent drug and those of its active metabolites must be considered simultaneously. Given that some active metabolites may have a longer half-life than the parent drug, the drug effects may persist well beyond the clearance of the parent drug at discontinuation because of the sustained levels of the long half-life metabolites. For example, pharmacokinetic studies show that the effects of norfluoxetine persist when fluoxetine, the parent drug, has cleared from the body (Plato, Murphy, & deVane, 1991).

Clinicians must also be aware of time-dependent kinetics, which refers to changes in the rates of pharmacokinetic processes over time, because these may alter the steady-state

drug concentrations. For example, research on plasma kinetics of carbamazepine shows that the drug may induce its own metabolism. That is, the half-life of carbamazepine is longer in an individual just starting the therapy than in those who have used it chronically, suggesting that steady-state drug concentrations decrease over time (Eichelbaum, Ekbom, Bertilsson, Ringberger, & Rane, 1975). This finding has important implications in terms of dosing and clinical outcome across individuals. Other concurrent events that may alter the steady-state drug concentrations include disease states, such as cardiac, renal, and liver disorders, which can markedly alter the kinetics of the psychotropic drugs through changes in the metabolism, excretion, distribution, and protein-binding of the drugs. Clinically, this means that the dose adjustments may be necessary when these disease states occur (Bennett, 1988; Williams & Benet, 1980). For example, clinicians often use creatinine clearance as a measure of renal function to estimate a dose adjustment for many drugs in renal failure (Bennett, 1988).

17.5.2 Pharmacodynamics

Pharmacodynamics deals with the relationship between drug dosage or concentration in the body and its drug effects, both desirable and undesirable. Thus, it deals with the mechanism(s) of drug action and generally describes what a drug does to the body.

Pharmacodynamic factors. The most important pharmacodynamic considerations include the following: (a) *receptor mechanism*, which describes how the drug binds at the cellular level and initiates its pharmacodynamic effects; (b) *dose-response curve*, which provides a plot of the drug concentration against the effects of the drug, and it allows the comparison of the efficacy and potency of the drugs; (c) *therapeutic index*, which provides a relative measure of the toxicity and safety of a drug and is calculated by dividing the median toxic dose by the median effective dose; (d) *lag time*, which is the time taken for the full therapeutic effects of a given drug to appear, and the reasons for a delay in the effects may be pharmacokinetic, pharmacodynamic, or both; and (e) *tolerance*, which refers to the responsiveness of an individual to a particular drug as it is administered over time.

Pharmacogenetics. Pharmacogenetics deals with idiosyncratic or unusual drug responses that have a hereditary basis (Weber, 2008). Responses to psychotropic and other drugs are modulated by their genetic predisposition. This is because "genes encoding enzymes or proteins that play a role in the drug response differ in some respect from one individual to the next" (Nebert & Weber, 1990, p. 469). When all other variables are held constant, an individual's pharmacogenetic response reflects a genetic difference in the metabolic rate when compared with that of a control participant. For example, Zhou, Koshakji, Silberstein, Wilkinson, and Wood (1989) compared the physiologic effects and the pharmacological disposition of the drug propranolol in a group of Caucasian Americans and a group of Chinese Asians. They reported that the Chinese participants were more responsive to the drug, displaying a larger reduction in the heart rate and blood pressure because they metabolized the drug more efficiently than the participants in the Caucasian group.

According to Nebert and Weber (1990), idiosyncratic drug responses that may be owing to the genetic variation in any of the subcellular steps involved in pharmacokinetics include the following mechanisms: (a) transport (absorption, plasma protein-binding); (b) transducer mechanism (receptors, enzyme induction, or inhibition); (c) biotransformation; and (d) excretory mechanisms (renal and biliary transport). Typically, clinical observations, family or twin

studies, protein polymorphisms, animal modeling, and deoxyribonucleic acid (DNA) poly-morphism characterizations are methods used to discover new atypical drug responses that may have a pharmacogenetic basis. The clinical importance of pharmacogenetics is that clinicians should be aware of the possibility of differences in drug response and dose requirements among children from various ethnic and racial groups.

17.5.3 Other Factors Affecting the Outcome of Pharmacological Treatments

The effects of psychotropic drugs are seldom determined solely by their pharmacological properties. Indeed, psychotropic medication is prescribed and used within a transactional *system* among children with psychiatric disorders, his or her family, physician, and other clinicians, as well as others (e.g., teachers, peers) who are significant in the life of the individual (Singh & Aman, 1990). Of course, we must remember that children often do not request assistance from physicians directly; but, their parents and other caregivers do. The child's views of the treatment process, his or her therapeutic alliance with the physician, and his or her attributions of the effects of medication are also important and may be responsible for at least some of the effects of pharmacotherapy (Towbin, 1995). Furthermore, other factors, such as compliance, placebo effects, and sociocultural factors are important in treatment outcome. However, almost all the studies on psychopharmacology of children have focused on biological, behavioral, and learning variables with the exclusion of many others.

Singh and Aman (1990) noted that our knowledge of the intended effects of psychotropic medication in children is often based on an assessment of the changes in the target behavior, symptoms, and syndrome as a result of a controlled trial of a given drug. They criticized this approach on the grounds that it does not include the study of interactions and interrelationships among environment, behavior, and drugs. A majority of the child and adolescent psychopharmacology researches, in general, focus on the consequences of specific drugs or drug combinations on the target behavior or diagnosis, without regard to the setting events or contextual factors that may influence the effects of these drugs. A transactional analysis would require that effects of pharmacological therapy be examined in terms of setting events; that is, the relevant contextual variables that transact to determine the treatment outcome. Some of these variables include behavioral teratogenesis, behavioral toxicity, compliance, comorbidity, placebo effects, reciprocal interactions, social variables (e.g., smoking and use of non recreational drugs), various sociodemographic variables (e.g., age, gender, and ethnicity), among others (Singh, Ellis, & Axtell, 1998). Psychopharmacology for children is a complex and rapidly moving field of research and clinical practice, and interested clinicians should read expert texts (Janicak, Davis, Preskorn, Ayd, Pavuluri, & Marder, 2006) and clinical handbooks (Preston, O'Neal, & Talaga, 2008; Werry & Aman, 1999) to keep abreast of the field.

17.6   Basic Competencies of the Clinician

A majority of the child clinical psychologists within APA's Division of Clinical Psychology are consulted by or consult with physicians on medical issues in the treatment of children with psychiatric disorders (Barkley et al., 1990). In addition, child psychologists assist physicians in

evaluating or monitoring the effects and side effects of medication on child and adolescent patients. Many primary care physicians include psychologists when discussing the psychopharmacological treatments with their patients (Bell, Digman, & McKenna, 1995). Owing to their broad knowledge of assessment and psychosocial treatments, the increasing use of pharmacological adjuncts in children in their practice, and their increasing collaboration with physicians in making medication decisions, the child clinical psychologists have sought to advance their knowledge of psychopharmacology through systematic training (Barnett & Neel, 2000). Given that most clinical psychologists see individuals who are on medication, particularly psychotropic medication for psychiatric disorders, it behooves them to have a working knowledge of clinical psychopharmacology (American Psychological Association [APA] Board of Educational Affairs, 1995). Indeed, it has been suggested that lack of such knowledge would be tantamount to malpractice (Foxhall, 1999).

An APA Task Force identified three levels of training in psychopharmacology (American Psychological Association [APA] Board of Educational Affairs, 1995, 1997) for clinical psychologists. Level 1, a single-semester doctoral-level training program, focuses on basic psychopharmacology that enables a clinician to provide assessment and treatment services to their patients. Level 2, a post-doctoral training program, focuses on collaboration between clinical psychologists and licensed prescribers "to manage medications prescribed for mental disorders and integrating these medications into psychosocial treatment" (Smyer et al., 1993, p. 398). Level 3, another post-doctoral training program, focuses on psychopharmacology training at the expert level that is prerequisite for prescribing privileges. The Level 1 course includes the following nine modules that can be adapted to predoctoral internships, doctoral programs, post-doctoral residencies, and CE workshop series:

1. Biological Bases of Psychopharmacological Treatment – 1 module
2–3. Principles of Psychopharmacological Treatment – 2 modules
4. General Introduction to Clinical Psychopharmacology – 1 module
5. Introduction to Psychopharmacological Treatment of Psychoactive Substance-Abuse Disorders – 1 module
6. Introduction to Psychopharmacological Treatment of Psychotic Disorders – 1 module
7. Introduction to Psychopharmacological Treatment of Mood Disorders – 1 module
8. Introduction to Psychopharmacological Treatment of Anxiety Disorders – 1 module
9. Introduction to Psychopharmacological Treatment of Developmental Disorders – 1 module

The modules include the purpose, learning objectives, major content areas of the syllabus, and sample test questions. The composite modules 2 and 3 are presented as an example in the subsequent section.

17.7   Principles of Psychopharmacological Treatment

17.7.1 Purpose

The purpose of these modules is to provide a fundamental understanding of how drugs are delivered to and removed from their site(s) of action; impart basic knowledge on the pharmacological features of different classes of drugs and the way in which these drugs produce their biological effects; give examples of clinically relevant drug interactions that illustrate the

pharmacodynamic and pharmacokinetic principles of drug effects; and describe the methods by which drugs are classified, regulated, and controlled by governmental agencies. These modules will provide the learners with basic mechanisms and principles of drug action that will enable more focused study on psychopharmacologic treatments.

17.7.2 Learning Objectives

These modules are designed to help the learner to:

1. Know the major chemical features of drugs that influence their effects on biological systems. Identify the major influences of drug absorption, distribution, and elimination, including a fundamental understanding of: (a) body compartments throughout which drugs distribute; (b) relationships between different routes of administration and bioavailability; (c) role of kidney, liver, and other organs in the elimination of drug and drug metabolites; and (d) the meaning and relevance of clearance rate, half-life, and first-pass effect.
2. Know the different types of receptors through which the drugs exert effects and the various mechanisms by which the drugs produce the effects through the receptors. Understand the principles that govern the actions of drugs at receptors and know the definitions and biological relevance of affinity, efficacy, and spare receptors. Recognize the pharmacological and physiological parameters that determine the selectivity, specificity, and potency of a drug.
3. Be able to describe and give examples of the various mechanisms by which drugs from the same and different pharmacological classes can interact. Know the therapeutic implications (positive and negative) of the drug combinations and drug interactions.
4. Understand the dynamic interactions that occur between drugs and behavior, and appreciate the importance of environment in determining drug action.
5. Appreciate the sources of individual differences in drug action that occur in association with gender, ethnicity, age, and specific physical conditions.
6. Know the various ways by which drugs are classified, including categories assigned by therapeutic uses. Identify how drugs are scheduled and the characteristics that lead to the classification in Schedules I through V.

17.7.3 Major Content Areas of the Syllabus

I. PHARMACOKINETICS

A. Absorption
    1. Passage through cell membranes
        (a) Passive diffusion
        (b) Carrier-mediated transport
            1. Facilitated diffusion
            2. Active transport
        (c) Pinocytosis
    2. Factors affecting absorption
        (a) Drug solubility
        (b) Route of administration

    (c) Concentration at the site of absorption

    (d) Blood flow at the site of absorption

    (e) Weak acids and bases, pH, and ionization

    (f) Age, gender, and ethnic considerations

  3. Sites of drug absorption

    – Oral, gastrointestinal, parenteral, others

B. Distribution

  1. Blood flow

  2. Plasma protein-binding

  3. Barriers (blood–brain, placenta)

  4. Redistribution (e.g., thiopental)

  5. Age, gender, and ethnic considerations

C. Elimination

  1. Biotransformation (metabolism)

    (a) Deactivation, activation (e.g., prodrug)

    (b) Sites of transformation

      1. Liver

      2. Lung

      3. Gastrointestinal

      4. Kidney

      5. Blood

    (c) Filtration and bulk flow

    (d) First-pass effect

    (e) Factors affecting metabolism

      1. Age

      2. Gender

      3. Ethnic

      4. Others (e.g., diet)

    (f) Enzyme inhibition

    (g) Enzyme induction

  2. Excretion: Renal, biliary, pulmonary, sweat, saliva, tears, milk, hair, skin

  3. Plasma half-life and biological half-life

  4. Physiologic modulation of drug elimination (e.g., pH)

D. Clinical pharmacokinetics

  1. Bioavailability

  2. Volume of distribution (Vd)

  3. Single and multiple compartment models

  4. Single and multiple administrations and constant infusion

  5. Steady state

  6. Zero- and first-order kinetics

II. PHARMACODYNAMICS

A. Receptor-mediated drug action

  1. Families of receptors

    (a) Cell surface (transmembrane)

1. Ligand-gated (channel)
2. Second-messenger linked (e.g., cAMP)
   (b) Intracellular (e.g., steroid)
2. Receptor regulation
3. Receptor desensitization
4. Receptor theory
   (a) Importance of free drug concentration at the receptor
   (b) Affinity (Kd)
   (c) Efficacy
      1. Full, partial, and inverse agonists
      2. Spare receptors
      3. Structure–activity relationships
   (d) Antagonism
      1. Simple competitive
      2. Noncompetitive
      3. Irreversible
      4. Pharmacologic versus physiologic
   (e) Specificity and selectivity of the drug action
      1. Relative affinities
      2. Availability of specific receptor types and subtypes
   (f) Dose–response relationships
      1. Threshold dose
      2. Potency
      3. Quantal and graded effects
      4. ED50
      5. LD50
      6. Therapeutic index
B. Receptor-independent drug action
   1. Alter normal metabolism (antiparkinson, antihypertensives)
   2. Alter chemical actions (anticoagulants)
   3. Alter physical structure (general anesthetics)
   4. Alter enzymatic activity (antibiotics)

III. DRUG INTERACTIONS (PHARMACOKINETIC AND PHARMACODYNAMIC)

A. Types of interactions
   1. Addition
   2. Synergism
   3. Potentiation
   4. Antagonism
   5. Novel action
B. Consequences of interactions
   1. Adverse effects
      (a) Tolerance
      (b) Dependence
      (c) Allergic reaction
   2. Altered (increased or decreased) therapeutic action

IV. BEHAVIORAL MECHANISMS OF DRUG ACTION

A. Environmental considerations
  1. Pharmacological history
  2. Behavioral history
B. Pharmacological and behavioral history and drug action
C. Tolerance and cross tolerance
  1. Pharmacokinetic
  2. Pharmacodynamic
  3. Behavioral (associative versus nonassociative)
D. Physical dependence and withdrawal
  1. Acute
  2. Chronic
E. Animal models of central nervous system dysfunction
  1. General experimental designs
    (a) Depression
    (b) Anxiety
    (c) Aggression
    (d) Schizophrenia
    (e) Movement disorders
    (f) Cognitive disorders
    (g) Drug abuse
  2. Validation of procedures
    (a) Face validity
    (b) Pharmacological validity
  3. Predictive value
  4. Problems and confounds

V. NOMENCLATURE, REGULATION, SCHEDULES

A. Ways in which drugs are classified:
  1. Origin
  2. Action
  3. Mechanism of action
  4. Site of drug action
  5. Therapeutic use
  6. Chemical structure
  7. Proprietary/trade names
  8. Street names
B. Common classification system for psychoactive drugs:
  One commonly accepted classification system of psychoactive drugs organizes them into seven classes by therapeutic use:
  1. Sedative-hypnotic compounds (CNS depressants)
  2. Stimulants and anticonvulsants
  3. Analgesic agents
  4. Antianxiety agents
  5. Mood-stabilizing agents

6. Antidepressant agents
7. Antipsychotic agents
C. Drug regulation and scheduling
   1. Controlled Substance Act, 1991
   2. Comprehensive Drug Abuse Prevention and Control Act of 1970
   3. Scheduling of drugs
     (a) Role of Health and Human Services
     (b) Role of Food and Drug Administration
   4. Enforcement of drug laws
     (a) Role of Department of Justice
     (b) Role of Drug Enforcement Administration
       – Controlled Substances Inventory
   5. Factors considered in scheduling of drugs
     (a) Abuse potential
     (b) Scientific evidence on pharmacological effects
     (c) Scientific evidence on pharmacologic properties
     (d) Current and historical patterns of abuse
     (e) Scope, duration, and significance of abuse
     (f) Risk to public health
     (g) Evidence on psychological and/or physiological dependence
     (h) Relationship to an already-controlled substance
D. List of Schedules, defining characteristics, and examples of the drugs
   1. Schedule I
   2. Schedule II
   3. Schedule III
   4. Schedule IV
   5. Schedule V
E. Teratogenic potential categories, defining characteristics, and examples of drugs
   1. Category A
   2. Category B
   3. Category C
   4. Category D
   5. Category X

17.7.4 Sample Test Questions

1. What route of administration typically delivers a drug fastest to the brain?
   (a) Intravenous
   (b) Oral
   (c) Transmuscular
   (d) Inhalation

2. What kind of action takes place at the post-synaptic membrane if a re-uptake inhibiting drug is applied?
   (a) Potentiation of the action of the synaptic neurotransmitter
   (b) Antagonistic properties

    (c) Upregulation

    (d) Termination of the action of the synaptic neurotransmitter

3. The half-life of a drug is_____.

    (a) A fixed property

    (b) Usually a function of urinary output

    (c) Affected by individual and group differences

    (d) Dependent on the disorder being treated

4. LD50 is a measure of a drug's_____.

    (a) Lowest dose that is effective for 50% of patients

    (b) Blood plasma level

    (c) Elimination rate for 50% of the drug

    (d) Lethality

5. Serotonergic function is most related to which of the following?

    (a) Abuse of benzodiazepines

    (b) Depression

    (c) Mania

    (d) Schizophrenia

6. Affinity and efficacy are properties of which types of drugs that act as receptors?

    (a) Agonists

    (b) Antagonists

    (c) Both agonists and antagonists

    (d) Neither agonists nor antagonists

7. Hepatic first-pass effect will not affect a drug that is administered by the_____ route.

    (a) Intramuscular

    (b) Sublingual

    (c) Transdermal

    (d) All of the above

8. The apparent Vd of a drug increases with_____.

    (a) Increased molecular weight

    (b) Increased first-pass effects

    (c) Increased lipophilicity

    (d) Increased polarity

9. Increases in the number of functional receptors will_____.

    (a) Increase the half-life of a reversible antagonist

    (b) Decrease the potency of a low-efficacy agonist

    (c) Have little or no effect on a high-efficacy agonist

    (d) Increase the potency of agonists and antagonists

10. A decrease in the gastrointestinal motility will have what effect on a drug that is absorbed slowly and incompletely from the small intestine?

    (a) Increase elimination

    (b) Decrease absorption

(c) Increase absorption

(d) No effect

11. Darvon is classified under which Schedule?
    (a) Schedule I
    (b) Schedule II
    (c) Schedule III
    (d) Schedule IV
    (e) Schedule V

12. The Comprehensive Drug Abuse Prevention and Control Act specifically excludes:
    (a) Distilled spirits and look-alike drugs
    (b) Cigarettes and antidiarrheal drugs
    (c) Wine and malt beverages
    (d) Immediate precursors of controlled substances
    (e) Herbal medications and look-alike drugs

17.8   Expert Competencies of the Clinician

Advanced training is available at Level 2 once the clinician has demonstrated prerequisite competencies at Level 1. Such training is at post-doctoral level, with one of the four areas of training being child and adolescent psychopharmacology. The curriculum and competencies for this course are presented in the following section.

17.8.1 Child and Adolescent Psychopharmacology

I. Professional and Legal Issues

Purpose and Learning Objectives

The participants will acquire advanced knowledge and understanding of:

A. The nature of the collaborative relationship between psychologist and pediatrician/psychiatrist/family practitioner. A focus on the benefits obtained and difficulties involved in collaborative practice for the purpose of facilitating an integrative relationship in the care of children and adolescents.

B. The legal and ethical issues to consider as part of a collaborative practice with the introduction of or changes in the pharmacological interventions with children and adolescents.

Content Areas

A. Interdisciplinary collaboration between psychologist and pediatrician/child psychiatrist/family practitioner
    1. Benefits
    2. Training, philosophical, assessment, and treatment differences between psychologists and physicians
    3. Responsibility issues
    4. Child/parent/family variables and their effects on the collaborative process

     5. Development of or difficulty in an integrated collaborative relationship

     6. Teacher and appropriate school personnel

B. Legal and ethical issues

    1. Scope of practice limitations

       (a) Consultation and referral

       (b) Providing mental health services to those referred by others

       (c) Boundaries of competence and need to maintain current knowledge

       (d) Avoiding harm

       (e) Vicarious liability

    2. Confidentiality

    3. Informed consent

       (a) Providing information

       (b) Volunteering for consent

       (c) Individuals' competencies to provide consent

       (d) Special ethical considerations where consent may not be obtained

       (e) Specific consent issues with pediatrics populations

          i. Parental or caretaker authority

          ii. Authority of children

          iii. Developmental issues in assessing competency

          iv. Assent

       (f) Procedures for obtaining consent

       (g) Documenting consent

       (h) Issues of consent and custody

          i. Refusing treatment

          ii. Child

          iii. Parent or caretaker

          iv. Privilege

          v. Malpractice as a function of psychologists having better knowledge of psychopharmacology

    4. Governmental restrictions related to prescribing practices

      – COBRA 1987 restrictions (Medicare/Medicaid patients)

    5. Practice guidelines for treatment of mental disorders

      – APA guidelines

II. Assessment

Purpose and Learning Objectives

The participants will acquire advanced knowledge and understanding of:

Assessment and monitoring of physical effects, behavioral, emotional, and cognitive effects of various pharmacotherapies for children, adolescents, and individuals with specific developmental/medical disabilities

Content Areas

A. Physical

    1. Baseline physical assessment

    2. Medical review of organ systems

    3. Physical and neurological examination

4. Speech and language assessment
5. Monitoring untoward side effects
    (a) Side-effects rating scales
    (b) Physical and neurological examinations
6. Laboratory measures
    (a) Biochemical assessment of blood and urine
    (b) Electrophysiological measurement (e.g., EKG)
B. Psychological
    1. Rating scales
        (a) Self-ratings
        (b) Parent
        (c) Teacher
        (d) Families
    2. Direct observations of behavior
    3. Laboratory measures
        (a) Mental abilities
        (b) Measures of executive functioning
        (c) Vigilance measures
        (d) Measures of learning and tests of achievement
        (e) Effects of medication on mental abilities
        (f) Use of psychological tests and measures to determine appropriateness of medication
            i. Mental abilities
            ii. Neurocognitive functioning
            iii. Social/emotional competencies
            iv. Adaptive competencies
            v. Use of psychological tests to assess compliance
    4. Psychological and substance-abuse-disorder evaluation
C. Pharmacological
    1. Efficacy and untoward effects
    2. Evaluating response to medication
D. Environmental
    1. Misattributing behavior change to medication
        (a) Teacher
        (b) Parents
        (c) Child
        (d) Peers
    2. Placebo effects
    3. Informed consent
    4. Interaction of environment with psychopharmacotherapy

III. Pharmacological Issues and Pediatric Variations

Purpose and Learning Objectives

The participants will acquire advanced knowledge and understanding of:

Basic tenets of pharmacology, including pharmacokinetics and mechanisms of drug actions (pharmacodynamics), as they specifically relate to: (1) normally developing pediatric populations;

(2) pediatric populations with mental disorders; (3) pediatric populations with developmental and/or physical disabilities requiring medication; and (4) pediatric populations with developmental disabilities with comorbid mental disorders.

Content Areas

A. Common psychological disorders and drugs used to treat them
    1. Attention deficit disorders: stimulants
    2. Oppositional defiant and conduct disorder: clonidine
    3. Mood disorders: tricyclic antidepressants, heterocyclic antidepressants, specific serotonin reuptake inhibitors
    4. Anxiety-related disorders: anxiolytics
    5. Psychotic disorders: neuroleptics
    6. Regulation disorders: tricyclic antidepressants, antihistamines
B. In each of these conditions and for each of these drugs, the following factors need to be considered
    1. Routes of drug administration
    2. Distribution
    3. Elimination
        (a) Biotransformation
            i. Hepatic
            ii. Intestinal
            iii. Gastric
            iv. Renal
        (b) Variability in biotransformation in pediatric populations
        (c) Excretion
            i. Urine
            ii. Feces
            iii. Lungs
            iv. Sweat
    4. Pharmacokinetics
        (a) Volume of distribution
        (b) Metabolism
            i. Gender differences
            ii. Ethnobiologic considerations
            iii. Physically disabled considerations
        (c) Elimination and clearance
    5. Pharmacodynamics
        (a) Receptor density
        (b) Function
        (c) Gender differences
        (d) Ethnobiologic differences
        (e) Physically disabled differences
    6. Drug concentrations
    7. Time course of action
    8. Dose-dependent drug effects
        (a) Gender differences
        (b) Ethnobiologic differences
        (c) Physically disabled differences

9. Mechanisms of drug action
10. Tolerance and dependence
11. Pediatric pharmacokinetics

IV. Unique Issues for Youth with Developmental and Medical Conditions

Purpose and Learning Objectives

The participants will acquire advanced knowledge and understanding of:

The interaction between psychopharmacological treatment and developmental/medical conditions that might affect the side effects and treatment outcome.

Content Areas
A. Physical sequelae
B. Pharmacological factors
C. Unique untoward side effects
D. Response factors

V. Treatment Issues

Purpose and Learning Objectives

The participants will acquire advanced knowledge and understanding of:

A. Social and environmental factors that influence medication administration, efficacy, and untoward effects. Emphasis will be placed on the role of institutions including schools, general hospitals, and residential, rehabilitation, and psychiatric facilities, as they influence pharmacotherapy with children and adolescents with and without medical disabilities.
B. Various phases in psychopharmacotherapy including the decision of whether or not to initiate pharmacotherapy, assessing long-term benefits as well as untoward effects, and considering whether discontinuation of pharmacotherapy is warranted.
C. Psychopharmacotherapy, in particular, as it interacts with various nonsomatic psychotherapies. This will include an essential understanding of the efficacy of various psychopharmacologies either in combination with psychotherapy or alone.
D. Assessment and management of nonadherence with prescribed psychopharmacotherapy.

Content Areas
A. Overall planning of treatment strategies
    1. Clinical judgment
    2. Use of behavioral evidence
    3. Use of clinical pathways
    4. Use of algorithms/decision trees
B. Initiation of treatment of psychopharmacotherapy
    1. Physical assessment, baseline physical assessment, and laboratory tests
        (a) Pre-drug physical
        (b) Laboratory assessment
        (c) Substance-abuse assessment
    2. Patient and family education
    3. Obtaining consent for treatment
    4. Gender and ethnic considerations

C. Stabilization of psychopharmacotherapy
    1. Monitoring efficacy of psychopharmacotherapy
        (a) Cross-situational evidence of efficacy
            i.   Parents
            ii.   Teachers/school personnel
            iii. Child
        (b) Rating scales
        (c) Direct observations of behavior
        (d) Laboratory measures of cognition
    2. Assessment of untoward side effects
        (a) Formal behavioral assessments
            i.   Rating scales
            ii.   Direct observations
            iii. Physiological assessments
            iv.   Blood and urine measurements
        (b) Parent assessments
            i.   Parent education and anticipatory guidance
            ii.   Rating scales
        (c) Teacher assessments
            i.   Rating scales
    3. Dose–response relationships
D. Maintenance of pharmacotherapy
    1. Tolerance
        (a) Behavioral and psychological tolerance
        (b) Physical tolerance
    2. Dependence
        (a) Assessment of addiction potential
    3. Ongoing monitoring and assessment of efficacy
    4. Ongoing monitoring and assessment of untoward side effects
    5. Short-term versus long-term gains
    6. Normalization of behavior, cognition, and learning
    7. Domain specificity and individual differences
E. Discontinuation/follow-up
    1. Patient education
    2. Systematic evaluation of behavior across informants
        (a) Rating scales
        (b) Direct observations of behavior
    3. Titration of dose
    4. Ongoing psychoeducation and psychotherapy
F. Multimodal therapies
    1. Attributional effects of medication used alone
    2. Benefits of both biologically mediated therapies and psychological therapies (Biopsy-chosocial model)
    3. Systematic evaluation of comparative efficacy of psychopharmacotherapy and traditional psychotherapy, and the combination of therapies

G. Compliance
    1. Enhancing compliance
    2. Counseling and education
    3. Relationship between client or patient and prescribing physician
    4. Assessment of compliance
       (a) Length of psychopharmacotherapy
       (b) Number of doses
    5. Direct measures of compliance
       (a) Laboratory measures
       (b) Blood levels
    6. Indirect measures of compliance
       (a) Interviews
       (b) Pill counts
    7. Factors associated with treatment adherence
       (a) Patient-related variables
          i. Cultural
          ii. Biological
          iii. Gender
          iv. Religious issues (i.e. Jehovah's Witness)
          v. Untoward side effects
       (b) Clinician-related variables
       (c) Family-related variables
       (d) Peer-related variables
H. Psychoeducation
    1. Patient and parent education
    2. Teacher and school education

VI. Research

Purpose and Learning Objectives

The participants will acquire advanced knowledge and understanding of:

A. The importance of new developments in the field of pediatric psychopharmacology through systematic reading and critical analysis of recent research with regard to safety, efficacy, and cost-benefits analysis
B. Systematic controlled clinical research including clinical trials and single subject designs
C. Available sources for new research in the area of pediatric psychopharmacology including accessing of databases, informational services, and other resources
D. Theoretical models of central nervous system mechanisms

Content Areas
A. Research preparation
    1. Literature retrieval strategies
    2. Pharmacological retrieval strategies and databases
    3. Research strategies for single case and group studies

B. Preclinical/clinical research
1. Theoretical models of mechanism of disorder
2. Models of drug development
3. Measurement and design strategies
4. Safety/abuse liability
C. Conducting clinical research
1. Acute trials
2. Long-term follow-up trials
3. Developmental issues
4. Multimodal trials
5. Consumer satisfaction
6. Cost-effectiveness
7. Meta-analytic strategies

17.9 Transition from Basic Competence to Expert

Once Level 1 and 2 training (or some variant of these two training programs) is completed, clinical psychologists can begin the training process for obtaining prescription privileges. In addition to training in psychopharmacology, the psychologist must meet the following requirements: (a) a doctoral degree in psychology (i.e., Ph.D., Psy.D., Ed.D.); (b) current state license as a psychologist; and (c) practice as a "health services provider" psychologist, as defined by state law wherever applicable, or as defined by APA. APA's recommended postdoctoral training in psychopharmacology for prescription privileges (American Psychological Association, 1997) has the following requirements:

Demonstrated knowledge of human biology, anatomy and physiology, biochemistry, neuroanatomy, and psychopharmacology is a necessary prerequisite for embarking on this postdoctoral training. Demonstrated knowledge involves evidence of (1) successful completion of a planned sequence of courses at a regionally accredited institution of higher learning, or (2) evidence of successful completion of a planned sequence of continuing education courses offered by an accredited institution of higher learning or an approved provider of continuing education, and passage of an examination covering the content of such a program. Individuals who are licensed health professionals with comparable prescription privileges in another profession and who are also licensed psychologists may be considered as an exemption from these training requirements by state boards of psychology.

A minimum of 300 contact hours of didactic instruction is recommended in the following core content areas:

I. Neurosciences
(a) Neuroanatomy
(b) Neurophysiology
(c) Neurochemistry

II. Clinical and Research Pharmacology and Psychopharmacology
(a) Pharmacology
(b) Clinical Pharmacology

(c) Psychopharmacology
(d) Developmental Psychopharmacology
(e) Chemical Dependency and Chronic Pain Management

III. Pathophysiology

This includes normal anatomy and physiological processes, as well as common pathological states, with an emphasis on how alterations in cardiovascular, renal, hepatic, gastrointestinal, neural, and endocrine functions affect the bioavailability and biodisposition of drugs. This area should also address the variability in drug bioavailability and disposition owing to ethnic and cultural differences. The course should include normal human anatomy and physiology as well as common pathological conditions that impact on the safety and efficacy of psychotherapeutic medications. Furthermore, variability in response owing to age, gender, disability, and ethnic differences should also be addressed. In addition, medical conditions affecting drug biodisposition and the likelihood of side effects, including contraindications for medication use, should be covered in this course.

IV. Introduction to Physical and Laboratory Assessment and Laboratory Exams

It provides familiarity with medical charts, physical exams, laboratory, and radiological examinations.

V.   Pharmacotherapeutics
    (a) Professional, ethical, and legal issues
    (b) Psychotherapy/pharmacotherapy interactions
    (c) Computer-based aids to practice
    (d) Pharmacoepidemiology

VI. Clinical Practicum

The clinical practicum is designed to be an intensive, closely supervised experience involving exposure to a range of patients and diagnoses. Ideally, it will take place in both inpatient and outpatient settings, and allow the practitioner to gain exposure to acute, short-term, and maintenance medication strategies. Age, gender, disability, and ethnicity should be important factors in determining an appropriate patient mix. The trainee should treat a sufficient range and number of patients to gain experience across these dimensions. To achieve competency in treating a sufficiently diverse patient population, a minimum of 100 patients, for whom the trainee assumes direct clinical responsibility or participates in case conferences, should be a goal of training. The patient mix should be relevant to the psychologist's current and future practice. Additional didactics, such as the sequence in pharmacotherapeutics outlined earlier can be included as seminars or colloquia during clinical training, along with additional training in physical and laboratory assessment. Supervision should be provided by qualified practitioners with demonstrated skills and experience in clinical psychopharmacology.

The requirements for the clinical practicum include: (a) minimum of 100 patients seen for medication; (b) inpatient and outpatient placements; (c) inclusion of appropriate didactic instruction; and (d) minimum of 2 h weekly of individual supervision.

17.10 Summary

Clinical psychologists are well-trained in assessment, diagnosis, and a diverse range of psychosocial interventions. Clinicians in other disciplines, particularly psychiatry, pediatrics, and family medicine continue to find psychologists with these skills to be valuable collaborators in patient care. As with adults, psychologists working with children and adolescents increasingly find themselves treating patients whose treatment regimen includes medication for psychiatric or medical disorders and diseases. Thus, it behooves them to have a working knowledge on psychopharmacology, not only because it enables them to make informed judgments about the psychosocial interventions that they may prescribe, but also collaborate with their medical colleagues as well as provide guidance to children, adolescents, and their families on psychopharmacological adjuncts. Further, given that there is a continuing interest by some clinical psychologists to obtain prescription privileges, the need to obtain further training in psychopharmacology is paramount (Ax, Forbes, & Thompson, 1997; Ax & Resnick, 2001; Fagan, Ax, Liss, Resnick, & Moody, 2007).

We have outlined the rationale for clinical psychologists to have basic, advanced, and expert knowledge on the general field of psychopharmacology. The suggested APA Level 1 and 2 curricula provide the essential elements of basic and advanced training in psychopharmacology. The courses are designed to be adaptable so that the Level 1 program can be integrated into the doctoral programs in clinical psychology, and the Level 2 program into post-doctoral programs. In addition, both can also be provided as Continuing Education programs for practicing clinical psychologists. The APA Level 3 program is designed for those psychologists who are interested in obtaining prescription privileges. There is a number of training programs that appear to incorporate these requirements (Levant & Shapiro, 2002). In addition, clinical psychologists and training directors should review the training materials from other disciplines that have a history of teaching psychopharmacology and preparing physicians to prescribe psychopharmacological treatments. For example, the ASCP psychopharmacology curriculum for psychiatric residency programs is an excellent model that clinical psychologists can use in their training programs (Glick et al., 2008). Certainly, the current core competencies of doctoral psychologists will not be enough to adequately prepare them to prescribe medications to children and adolescents. Hence, they may need further foundational and advanced core competencies in psychopharmacology. Psychologists can begin the course work at the doctoral level, and achieve the required competencies at the postdoctoral, postlicensure level.

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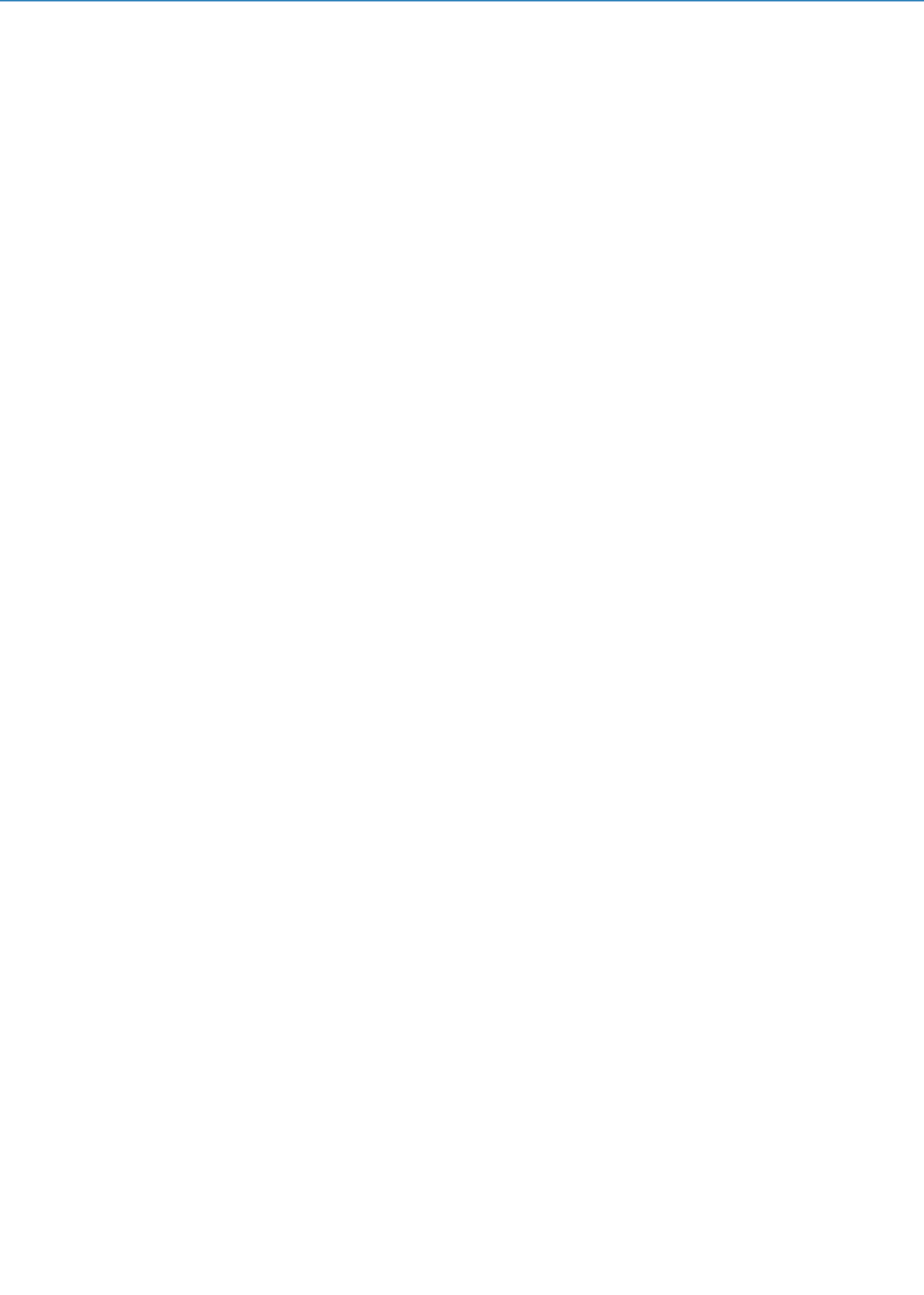
18 Family Issues

Alyson Williams · Jessica Bolton

Abstract: The aim of the present chapter is to discuss basic and expert competencies for effectively treating children and adolescents with family-related difficulties. Critical to developing competencies in any area involves an appreciation for gaps in knowledge; therefore, limitations to the current state of generalist training with regard to family issues are briefly outlined. The authors promote a systems theory approach for assessment and treatment that hinges on thoughtful consideration of the context in which an individual and family is embedded. Specifically, a number of conceptual and practical elements of assessment are highlighted, such as theoretical underpinnings, important domains of inquiry, and complementary forms of measurement. With regard to treatment, it is suggested that by adopting a systems-oriented conceptualization of the presenting problem, the therapist will engender a better understanding of maintenance factors and be better equipped to facilitate necessary change. While the authors promote evidence-based practice, training clinicians and supervisors alike are admonished to balance their empirical stance with a relational warmth and thoughtful creativity that can easily become neglected. To summarize, several suggestions germane to facilitating a fluid transition from novice to expert practitioner are discussed.

Overview

Psychologists and other mental health service providers in the roles of instructors and supervisors have the difficult task of teaching students to be at once respectful toward individual differences, mindful of general themes that might ring true for clients in particular groups, and also competent in seeing the "big picture" or context in which individual problems are embedded. Generally, the "big picture" includes the family and "family issues" – especially in child and adolescent psychology. Although this may seem intuitive rather than surprising, there are many barriers preventing effective training in the assessment and treatment of family-related problems. Limitations of current generalist training and methods for service reimbursement add to the difficulty of training psychologists to practice in a way that is appreciative of the impact of family issues on individual functioning, and also sustainable and efficient.

To overcome these limitations and motivate students and their instructors to pursue new directions in training, this chapter provides a road map for teaching and learning about the multiple components that lead to competency and expertise in treating family issues that involve children and adolescents. It is intended that the reader will gain a better understanding of the following: (a) competent assessment and recognition of family issues, (b) maintenance factors of problematic family issues, (c) basic mechanisms for facilitating change in family issues, (d) the current state of family-oriented empirically-based interventions, and (e) steps required to develop competence and expertise in the assessment and treatment of family issues. We begin by providing some background regarding the barriers faced by instructors and supervisors in the pursuit of effectively training students of psychology to assess and treat family issues that impact child and adolescent clients.

18.1 Contextual Information: History, Current Definition, Assumptions, and Limitations

18.1.1 History

Our conceptualization of "family issues" as a target for assessment and treatment in psychology has some foundation in systems theory. In family therapy, organizational behavior, and clinical theories courses, students are usually exposed to theories on system dynamics (e.g., Bronfenbrenner, 1977, 1979). In these courses, training might be centered on historical theories guiding the family therapy, organizational and general systems interventions, and specific, clinically oriented systems theory applications. A thorough review of systems theory is beyond the scope of this chapter. For further reading, the reader is referred to texts written by Becvar and Becvar (1998) and Broderick (1993). For the purpose of this chapter, it is useful for the reader to know that systems theory informs our definition of "family issues" as well as our suggestions on how to become competent in treating them. In a simpler way, the basic systems principle we draw on here is that any symptom or problem in an individual impacts the system in which that person is embedded. Specific to child and adolescent psychology, this implies that whether the child or other family member is struggling psychologically, everyone in the family is impacted in some way.

A separate, but perhaps less touted, contributor to family issues is encompassed in what we refer to here as *context*. Though not located in any one book or even one sector of the literature in psychology or other fields, an emphasis on the understanding of the context surrounding a child or adolescent client is crucial in assessing and treating family issues. That is, beyond paying homage to systems dynamics, it is suggested here that instructors, supervisors, and students use the plethora of historical and current literature on contextual factors impacting individuals. For example, behaviorism relies on the idea that the environment shapes behavior (Skinner, 1971, 1974). *Behavior setting theory* pays specific attention to how specific characteristics of the environment actually make certain behaviors impossible or almost certain (Schoggen, 1989). A number of other references allude to the interaction of systems in an individual's life that impact overall well-being and psychological functioning (e.g., Feldman & Pinsoff, 1982; Fingerman & Bermann, 2000; Magnusson, 1995). So, beyond systems dynamics, we draw here from the history of understanding provided in psychology and several other fields that the broad contexts in which the person is embedded and the people, resources, and situations they provide or lack also have an influence.

18.1.2 Current Definition

An initial barrier in treating "family issues" is a lack of consensus in defining them. For example, is depression a family issue? Several researchers would say "yes" (e.g., Katz, 1999; Messer & Gross, 1995). Is childhood anxiety a family issue? Siqueland and Kendall (1996) would argue it is so. Problems relating to juvenile delinquency are certainly "family issues" according to developers of many currently well-established models for treating adolescents who are incarcerated, detained, or on probation (e.g., Alexander & Sexton, 2002; Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998; Liddle, 2004). While the vaguely defined construct of family issues seems to unify researchers and practitioners across distinct problem areas, it still remains difficult to understand without some parameters. In this chapter, family issues are

defined as *problems or challenges in the familial, interpersonal/relational context of an individual that impact his or her functioning.*

There are a few things to be noted about this definition. First, the definition was designed to be inclusive of those relational difficulties that may not be occurring currently but continue to impact the individual. For example, a family issue of parental conflict during a client's childhood may impact his or her ability to attain satisfaction in intimate relationships as an adult (e.g., Bowlby, 1969, 1973, 1980). This type of difficulty might often be labeled as a family-of-origin issue (Nichols, 2003) and would fit into our definition of family issues.

An additional critical quality of the above definition is that the issues in question are not defined by the domain of treatment (e.g., individual, family, couple, or group therapy), but rather by their impact on an individual's functioning. This allows for the discussion of how to assess and treat family issues across individual, couple, group, and family therapies regardless of who is seen in treatment. It also necessitates explanation of who is defined as "the client," which is provided later in this chapter. For now, it is useful to note that family issues are not restricted to those addressed in family therapy. As such, this chapter offers tools and perspectives applicable to the treatment of family issues across different types of therapy.

Finally, the characterization of family issues as utilized throughout this chapter does not specify a separate definition for "family." Thus, there are no biological tests required to establish whether something is in fact a family issue. In addition, there is no inherent bias or value placed on family structure from which the family issues are derived. Using this definition of family issues implies that the therapist adopts an open and culturally sensitive view on what constitutes a family. It would be inappropriate to constrain the definition of family to the therapist's own perspective and contextual background. Instead, avoiding assumptions of biological relation, heterosexual parents, and married partners, for example, is required for the relationship of issue to be labeled as a "family" relationship. Within this definition, an unmarried couple of any sexuality may be considered a family. In addition, a single, foster mother and a best friend or neighbor of the client may also be considered the client's family. This way of characterizing families also allows for definitions of "family" unique to diverse cultures to be included. Perhaps, the most concrete examples of what one would consider a family issue would be parent–child conflict, or stressors between partners who consider themselves family. However, given our broad parameters for defining "family issues" such as general distress, interpersonal conflict, individual psychopathology, and any other range of problems may be assessed and treated as family issues.

Therapists might ask clients whom they consider family to determine which members of any given system may be important to include in treatment considerations. In addition, finding out with whom the clients live, and who is important to them in positive and negative ways can assist in identifying potentially important players in any family-sensitive intervention. Being an important player does not mean the identified person must be a part of therapy. Instead, it means the therapist must consider this person and his or her impact on the client and any intervention to be suggested throughout the course of therapy. The therapist must combine the client's definition of "family" with an astute observation of the important players to be as inclusive and thoughtful as possible when inviting family members to therapy, and when carrying out systemically oriented interventions for individual clients.

Apart from knowing the definition of "family issues" relevant for this chapter and effective training in psychology, it is also imperative that the reader become aware of some underlying assumptions regarding psychological problems embraced by the literature and the current authors.

18.1.3 Current Assumptions and Limitations

It is critical to make psychologists in training aware of the ways in which they might efficiently build competence in areas that are individually focused with regard to diagnosis. It is also critical, however, to foster in students the notion that whatever the specific diagnosis of a child or adolescent, treatment requires an appreciation for and critical thinking about the family context surrounding that individual. In line with this assertion, this chapter is written with the following underlying assumption: family issues are concurrent with any and every mental health strength and challenge that children and adolescents present in treatment. To be competent as a mental health provider, it is impossible to ignore them. As such, we argue that traditional, generalist training in psychology is limited with regard to its emphasis on using the Diagnostic and Statistical Manual ([DSM-IV-TR], 2000) and other diagnostic manuals (e.g., International Statistical Classification of Diseases and Related Health Problems, [ICD-9], 2008; Psychodynamic Diagnostic Manual [PDM], 2006) to assess and treat children and adolescents (and arguably many other types of clients). The limitations noted here are that presenting problems are assessed, treated, and billed as separate, individualized disorders. This, in turn, requires individually focused training for trainees to develop competency and appropriate practices for medical billing. As a consequence, psychologists in training acquire more skills in areas of individual diagnosis and individually focused treatment. Not surprisingly, the importance of family-related issues is underemphasized or dismissed in training, and the psychologists in training enter their professional careers with a fundamental challenge: while they see the connection between family contexts and individual diagnoses, they do not know how to work within family systems to maximize success in treatment.

To adequately address this challenge, the current authors assume that our trainees in psychology are required to become more than just technicians who can assess for diagnostic criteria and apply a worksheet from a manual by handing it to their clients. As may be a common experience, we have come across students and veteran psychologists who can implement specific techniques, but offer very little in warmth and the ability to think on their feet. Effective practice in the mental health field requires quick, critical thinking and creativity *in addition* to tools and diagnostic ability. The premise on which the remainder of this chapter is based is that intervention and diagnostic "tools" do not generally encourage critical thinking and creativity. Instead, they provide some important structure for the very complicated pursuit of helping children and adolescents in distress. It is argued here that this structure is necessary but not sufficient. We suggest that becoming competent in the assessment and treatment of family issues (and arguably any mental health issue presented by children and adolescents) requires knowledge of the "tools" as well as a solid foundation of critical thinking skills and creativity. The following section provides an overview of specific methods to facilitate the assessment and recognition of family issues as a primary challenge in treating youth.

18.2 Recognition and Assessment of Family Issues

As in any area, assessment and recognition of issues in the family realm is important. However, family issues involve multiple people and therefore multiple perspectives on "the problem." As such, problem recognition and assessment is arguably more complicated when it comes to family issues. Many clients enter treatment with a very clear definition of "the problem."

No detective work is required to hear and respond to a client's idea of the presenting problem. The challenge, however, is in how a clinician defines the problem prior to entering the therapy room. Prior to describing methods for assessing family issues, it is necessary to define "the problem" within the context of the family.

18.2.1 Defining the Problem

First, a psychologist treating family issues must acknowledge and examine how he or she views the nature of any clinical problem. In this chapter, the nature of any clinical problem is assumed to be relational. While this may sound logical with regard to the treatment of family issues, seeing the problem as between people rather than within an individual requires quite a shift in perspective for most clinicians.

One reason therapists may tend to see problems *intra*personally rather than *inter*personally is that the diagnostic and medical billing system for services is organized on an individual basis. Even in the diagnostic manual for mental disorders (DSM-IV-TR, 2000), there are no formal relational or familial diagnoses. This is true despite fairly widespread recognition that family strengths and challenges have a great deal to do with determining the causes, prevention factors, and continuance of problems, and effectiveness of treatment for child and adolescent mental health problems (Davis, 2004). While "V-codes" that describe family and relationship difficulties exist in the DSM-IV-TR (2000), none are reimbursed by insurance companies, and the manual itself is not geared toward relational assessment. It is important, however, for the reader to entertain the idea that problems are relational in nature rather than simply intrapersonal. This does not dismiss the notion that individuals experience legitimate, unique, non-relational difficulties captured within any given disorder listed in the DSM-IV-TR (2000). It is only to say this is not *all* an individual experiences. For appropriate assessment and recognition of family issues, the clinician must first entertain the idea that issues are, at least in part, relational in nature.

The second component of problem definition that warrants discussion with regard to family issues is the multiplicity of problems. As mentioned earlier, family issues imply the involvement and responsibility of more than one person; therefore, the number of perspectives on the problem multiplies. As such, it becomes essential for the family-focused clinician to observe presenting problems as indicative of a pattern that should be recognized and intervened upon as such, rather than a pile of problems requiring a variety of distinct solutions (Alexander & Sexton, 2002; Henggeler, Borduin, & Mann, 1993; Kazdin, 1997; Minuchin, 1974). This becomes especially important when considering family issues as a central focus of therapy. Although one could (and many clinicians do) simply pose the "what's the problem" question and go about treatment based on the client's answer, it is suggested here that this is an oversimplification of the nature of the problem at best. At worst, it becomes the platform for misguided and ineffective treatment.

To sum up, clinicians hoping to be effective should assume that the content of problems presented by clients is indicative of a problematic pattern of behavior, thoughts, or other things, and that this pattern is a more reliable and efficient target for change than the surface content (Minuchin & Fishman, 1981). If a therapist cannot recognize such patterns, she or he may end up in an endless pursuit of solving one, distinct problem at a time and will unwittingly discourage self-sufficiency in the client system.

18.2.2 Assessing and Recognizing the Problem

While reading the subsequent paragraphs on the assessment and intervention for family issues, it will be useful for the reader to keep in mind the two aspects of the "problem" described earlier: (a) problems are relational, and (b) assessing the recurring pattern underlying the content presented about the "problem" is important. The next sections describe conceptual and practical components of effective recognition and assessment of family issues in clinical work.

Assessment of family issues requires consideration of factors on multiple levels including individual, dyadic, and systemic factors. Therefore, the clinician must be aware of risk factors at each of these levels and craft an intervention that will address them cohesively, comprehensively, and concurrently. This section provides some examples of how this is done to maximize the chances for recognizing family issues, understanding the nature of the family issues, and setting up effective treatment to address them. It is organized to distinguish between conceptual and practical elements of assessment, which should begin to answer the questions of "what does assessment require?" and "how do I do it?" respectively.

Conceptual. Taking into account the required attention to multiple levels within any family system, it is first necessary for a clinician assessing family issues to be aware that any information (s)he gathers could be of value at any single level or all levels at once. Specifically, Bronfenbrenner's (1977, 1979) model of systems provides a useful framework to prepare a clinician to attend to them. At the very least, what Bronfenbrenner referred to as the individual, microsystem, macrosystem, and exosystem should be considered when assessing family issues. In addition, clinicians should attend to each relevant subsystem. That is, at each of these systemic levels, there will be biological factors, psychological or emotional factors, and relational factors affecting any client's well-being (Engel, 1977). With these systems in mind, the task of assessing family issues is to identify risk and protective factors influencing client functioning embedded in each of these complex levels.

A second conceptual tenet of adequate assessment of family issues involves an acknowledgement of multiple perspectives. To be poised to recognize and treat issues of a family nature, clinicians must keep in mind that more perspectives can lead to a more thorough and therefore effective assessment and understanding of clinical problems, which ultimately leads to a more efficient, effective treatment of child and adolescent clients. A few tips on how to assess risks and buffers (i.e., protective factors) within these multilevel systems and intra-individual domains are provided here. In addition, pathways to gather multiple perspectives are carved for therapists who practice individual, family, group, or other types of therapy with children and adolescents.

Practical. A first step in the effective assessment of family issues is to become acquainted with general and specific risk factors for children and adolescents. There are several sources conveying a variety of risk and protective factors for this population (Kazdin, Rogers, & Colbus, 1986; Linehan, Nielsen, & Chiles, 1983). A brief perusal of this literature suggests that there are several commonly agreed-upon factors that can put a child or adolescent at risk for negative outcomes and impairment in functioning. In addition, several factors promote positive development and high functioning or resilience in young people. Risk factors include poverty, experience of abuse, parental conflict or divorce, single parenting, teen parenting, parental substance abuse or other psychopathology, large family size, and lack of parental support system (Coley & Chase-Lansdale, 1998; Davis, 2004). Protective factors that may prevent negative consequences despite risks include having a strong relationship with an adult, parental warmth, modeled

coping skills, developmentally appropriate expectations by caregivers, clear rules, and structure with regard to daily tasks and longer-term traditions (Masten, Best, & Garmezy, 1990; Werner, 2000). Such factors are important, as they make up the context of any individual child or adolescent and can influence the outcome of therapy. They might be assessed using multiple methods, such as direct questioning of the child and relevant adults, implementation of surveys that pull for information about these factors, behavioral observation of individuals and relational interactions, and active listening throughout the therapy process for these factors and their influence on the child or adolescent. It is suggested that clinicians prepare for early sessions with these factors in mind, which will increase the chance of these factors being assessed adequately.

In practical terms, there are several ways in which a therapist can assess for priority family issues or risks present. First, as recommended earlier, the clinician should come to the first session prepared to gather information about individual, relational and contextual risks and buffers. Informal assessment of family issues requires ongoing monitoring of risk at each of these levels. This type of assessment is done in the beginning and throughout the course of therapy to appropriately inform practice. Viewing every interaction with a child or adolescent client as part of the process of assessment will help steer the clinician toward being maximally apprised of client risk in an enduring way. Asking direct questions about family context, historical and current risks regarding substance use, violence exposure and experience, medical history and developmental history, social relationships, educational status, and family dynamics is useful. In addition, adolescents as well as their parents and guardians may disclose different components of their history and current status in these domains when they are allowed to write them instead of simply reporting them verbally to the therapist. It is suggested that the clinician provide written surveys or brief questionnaires at intake in addition to the verbal questioning necessary in a first session. This may add to the breadth and depth of initial assessment information. Some suggested areas of questioning for useful inquiry initially and throughout the therapy with children and adolescents are presented in ❯ Table 18.1. These are presented to assist therapists in creating multiple methods (i.e., verbal questioning, informal written surveys at intake and throughout therapy, etc.) for gathering this type of information.

In addition to informal methods of assessment for family issues, formal assessment measures can be used to add information in any of the categories highlighted in ❯ Table 18.1. Ideally, the use of formal measures occurs across multiple sessions to monitor progress and outcomes. Here, we provide a brief discussion of current, psychometrically sound measures that are widely used when working therapeutically with children and their families.

One recommended measure is the Hudson's Index of Family Relations (IFR; 1982). The IFR was designed to measure the severity of the problem with regard to family functioning. Hudson's IFR also provides a format for a comprehensive assessment of family perspectives. An additional useful component to data collection is to assess for interaction styles that are obstructing desired family functioning. The Family Environment Scale (FES; Moos & Moos, 1994) is a 90-item scale using a dichotomous true–false format to assess aspects of family functioning in multiple areas including family cohesion, expressiveness, and culture. To supplement the FES measure, there is a Children's Version of the Family Environment Scale (CVFES; Pino, Simons, & Slawinowski, 1984) that was developed for children of ages 5 to 12. The CVFES is a 30-item measure that requires the child to select one of the three cartoon pictures that best represents his or her family. Another useful scale is the Parent–Adolescent Communication Inventory (PACI, Form A; Bienvenu, 1969). The PACI is a 40-item test designed to measure an

◘ **Table 18.1**

Recommended domains of inquiry for initial interview

Area of inquiry	Specific probes
Family context	• Family structure • Living situation • Siblings and birth order • History of abuse, neglect, or exposure to domestic violence • Parental relationship and structure (traditional, two moms, two dads) • Parental functioning (e.g., substance use, mental health history) • Current relationships with family and family dynamics • Identified client's number of children • Other children not living with family • Other family members important to child or adolescent • Family losses (e.g., death or estrangement)
Educational context	• General school affinity • Grade history • History of suspensions, expulsions, referrals • Peer relations • High school, college, or other completions and current attendance
Social relationships/activities	• Number of perceived friends and acquaintances • Intimate relations history and current status, including sexual orientation • Physical violence in peer or intimate relationships • Perpetration or victimization of bullying • Isolation from peers • Amount of contact with peers • Activities for leisure • Religion/spirituality • Occupational history and relationships with co-workers • Impairment due to symptoms
Medical history and developmental context	• Significant history or current medical problems • Current medication • Satisfaction with medications • Achieved developmental milestones • Developmental delays
Mental health history	• Previous treatment for current or other symptoms • Length and experience of previous treatment (e.g., helpful or otherwise) • Family mental health history and treatment • Prior hospitalizations • Suicide attempts • Other current mental health services

◙ Table 18.1 (Continued)

Area of inquiry	Specific probes
Substance use history	• Use of alcohol, drugs, cigarettes, caffeine (i.e., self or family member) • Prior treatment for substance use (i.e., self or family member) • Functional impairment
Legal history	• Legal history • Pending trials or other legal matters • Dates and nature of cases pending
Behavioral observations and mental status	• Oriented X 4 (i.e., person, place, time, and purpose) • Cooperation and presentation • General affect and appropriateness for situation • Thought processes • Speech characteristics • Hallucinations or evidence of delusions
Risk concerns	• Current suicidal or homicidal thoughts or behaviors • Dates and times of suicide attempts, psychiatric hospitalizations • Current plan or intent • Current supports to prevent self or other harm • Accessibility • Current victim of abuse • Family history of suicide or homicidal behavior

adolescent's perceived communication style with his or her parents. There is also a parallel parent form (i.e., PACI, Form P) that assesses the parents' perspective regarding communication interactions.

In addition to assessing individual symptoms and perspectives and general family functioning, it may also be useful to assess the quality of the parental relationship. It is a common view among therapists concerned with treating family issues that troubled parent interactions creating a trickle-down effect by which the rest of the family is negatively influenced (e.g., Friedlander & Tuason, 2000; Minuchin, Nichols, & Lee, 2007; Patterson & Chamberlain, 1988; Stern & Reid, 1999). One well-known assessment measure regarding the primary relationship in the family is the Marital Satisfaction Inventory-Revised (Snyder, 1979). This self-report measure identifies key stressors among several dimensions of the relationship, including affective communication, problem-solving, aggression, sexual dissatisfaction, role orientation, family history of distress, dissatisfaction with children, and conflict over child rearing. Another option is the Dyadic Adjustment Scale (DAS; Spanier, 1976), a measure that can be used for both traditional marital relationships and for cohabitating partners in less traditional, heterosexual family structures. The DAS is a 32-item instrument used to assess relationship satisfaction and quality of communication between partners.

Beyond formal assessments directed particularly toward family relationships, individual measures of distress may also be used for formal assessment of family issues. The Outcome Questionnaire (Lambert et al., 1996) and Youth Outcome Questionnaire-Self Report (YOQ-SR; Burlingame, Wells, Lambert, & Cox, 2004) versions are helpful as well as brief

and low cost. The areas probed in these assessments are symptom distress, school or work functioning, and interpersonal relationships, all of which provide useful information on potential family issues from the individual perspective. In addition, critical items regarding substance use and suicidal ideation provide an additional probe for these important individual risk factors.

Several of these measures require a training clinic or an agency to purchase the license, manual, and the measure itself. While this may be potentially cumbersome and expensive, it is advisable for clinicians and training clinics to research these options and others to assess what would best meet the needs of clients served. Individually, some measures are fairly low cost and easy to learn for administration and scoring. Alternately, components of these measures may appear on formal assessments located in the public domain. These can be found by searching the Internet learning about measures used by other training clinics serving similar clientele. This may result in skill-building for the clinician in training and the creation of a checklist of issues to address when seeing child and adolescent clients and assessing for family issues. Finally, trainees should be encouraged to make good use of assessments already adopted at their training site. Often we educate students of psychology in the area of "critiquing" assessments versus thinking critically about their potential applicability. We suggest here that such critiquing may lead trainees to dismiss potentially useful (if imperfect) aspects of formal assessments that already exist within the system in which they are training. They should instead use such assessments with supervision, caution, and critical thought rather than dismissing them altogether.

Critical thinking and creativity. As in other areas, measures described above for use in assessing and addressing family issues may be limited in their cultural appropriateness. They should be used with caution with clients in alternative family structures, such as same-sex parent families, as many measures include insensitive, heterocentric language, and lack appropriate norms.

With regard to the treatment of family issues, some creativity combined with good clinical judgment as applied to the use of these imperfect measures may expand their utility. It is important for trainees to know that the goal of assessment is to gather information to be used to inform treatment. They should note that this goal does not include finding the perfect, comprehensive, culturally sensitive formal measure for identifying family issues – such a thing does not exist. This is why multiple methods for assessment are taught across different areas in psychology. For example, if the language in an instrument is heterocentric or makes assumptions about families that are not appropriate for certain clients, the clinician may determine for whom the assessment may be useful despite these flaws, and administer it to those clients. This is perhaps a means of utilizing available resources by the clinician, but acknowledging their shortcomings in use and interpretation for clients. One way to increase awareness of these types of shortcomings is to incorporate the manuals into clinical training, such that clinicians are able to make a careful evaluation of the tool prior to its administration. In addition, a clinician may re-word items in their own assessment process and construct informal surveys during intake and other sessions. This will allow gathering similar information in a more sensitive way that matches the client.

From a training perspective, it is critical that students of therapy for children and adolescents learn to think critically about the use of these measures – not to rigidly use or dismiss any single measure. Further, while data collection is useful for identifying symptom change, it is important to keep in mind that a decrease in symptoms alone does not necessarily constitute

successful treatment. Positive outcomes in family therapy may also include subjective report of healthier functioning (e.g., improved conflict-resolution skills, development of appropriate boundaries) and well-being of the family as a whole (Gaylin, 1999). The therapist will gain most information by using multiple methods for tracking change, such as clinical observation and idiographic or written self-reports in addition to formal assessments. In any case, the clinician should avoid allowing any one method of data collection speak solely for the client's status regarding risk and salience of family issues.

Ideas listed in the preceding text should provide direction regarding where to start to ensure that the clinician is assessing for risk and family issues thoroughly and efficiently. Assessment of family issues must also include understanding what patterns (i.e., behavioral, cognitive, and emotional patterns) maintain a child or adolescent's psychological difficulties. These maintenance factors as a portion of the assessment process and an essential domain of understanding for therapists are discussed in the next section.

18.3 Maintenance Factors

Systems theorists have a long history of describing the factors that maintain family problems (Becvar & Becvar, 1998; Broderick, 1993; Feldman & Pinsof, 1982; Fingerman & Bermann, 2000). The reader is referred to these multiple authors for detailed descriptions of the fundamental uniting force across theories: family issues are maintained by the family itself. Some systems theorists, such as Virginia Satir, posited that this is due to inherent, maladaptive patterns employed by individuals within the family system (as cited in Lawrence, 1999). Others subscribe to the idea that homeostasis is the ultimate goal of any system and, as such, problems are maintained because they serve to preserve homeostasis, despite their negative consequences (Guerin & Guerin, 2002). The list of interpretations and differing perspectives within the systems theoretical community about problem maintenance is long. For current purposes, we describe a basic framework for therapists to rely on for guiding their understanding of family issues their clients present.

Most students may already be aware of the notion of "secondary gain" used to describe why any clinical problem is maintained. Secondary gain, a term first coined by Sigmund Freud, has been described as a reason for clients to have difficulty in changing their thoughts, feelings, behaviors, or circumstances (Craighead & Nemeroff, 2001). The notion holds that the preservation of the problem serves some benefit to the client. We find this idea compelling and useful in application except for its potential for negative interpretation. That is, the implication that clients benefit from their own problems, we believe, sets the therapist up somehow to see the client in a negative light, as manipulative or resistant to change. At best, it requires the therapist to remain hopeful despite this negative view. At worst, this view may propel a therapist to intervene by "educating" the client about what is being gained by problems. This, we suggest as potentially harmful in that it may become dismissive of a client's struggle and may therefore lead a therapist to attempt to convince the client that his or her problems are of some benefit. When a therapist begins attempting to convince client families of any matter, this is often a sign that the relationship is poor. It can also foster an argumentative interaction and imbalanced alliance amongst family members. Clients with family issues may respond more positively to an *experience* that provides evidence that their problems are being maintained by their own patterns versus being told by the therapist that it is so.

Regarding the treatment of family issues, we suggest a different label for understanding a similar concept: function. As systems theory holds, problems serve a function within any family system (Becvar & Becvar, 1998; Broderick, 1993). Some current models of family treatment suggest that clinicians avoid judging the positivity or negativity of the function, but design interventions to maintain it (e.g., Alexander et al., 1998). That is, respecting system dynamics that will always be maintained by the behavior of embedded individuals, the therapist might more effectively assess the function of certain behaviors and simply replace the poor behavior with a more adaptive behavior, versus being concerned with disrupting or eliminating the function (Alexander & Sexton, 2002, Alexander et al.).

As an example, consider a teen client with disruptive and oppositional behavior problems. The client presents in therapy at the mandate of her mother, who reports the client interrupts, is otherwise disrespectful to her as a parent, and at times becomes physically aggressive if she is not granted things she demands. A systems-oriented clinician would do well to inquire about the relationship between this client and her mother, and seek understanding of the pattern of interactions leading to client outbursts. In this process, the clinician may apprise that the client's behavior is protective in nature. Although destructive physically and emotionally at times, it may be determined that such acting out protects the client's mother from feeling isolated, in that third party supports are engaged. In this way, the "function" of the client's behavior may be to summon third party (i.e., counselor, police, school personnel) assistance. If each time the teen is disruptive, the mother receives outside support; an intervention to stop the disruptive and oppositional behavior may also unintentionally cause the mother to lose support. If systems theory principles of homeostasis and interdependence hold, another type of behavior will erupt to preserve this important function if the function is lost due to intervention. The discussion of how to facilitate change in a manner appreciative of such complicated problem functions is presented here.

18.4   Mechanisms of Change

Describing the mechanisms of change with regard to any problem resolution of the clinical type is important. Essentially, knowing the mechanisms of change for family issues is akin to answering the critical question of *how do we facilitate therapeutic change*? With particular regard to family issues, there are at least two very relevant domains to acknowledge in order to answer this fundamental question: *elements facilitating change* and *sequence of implementation*. Exploring the *elements facilitating change* provides trainees with *what* needs to occur to facilitate change, and the *sequence of implementation* assists with determining *when* is the best time to implement which tools to foster change. As described here, these domains must be understood and combined to maximize the chance of facilitating client change for youth experiencing family difficulties.

18.4.1 Elements Facilitating Change

Some conceptualize mechanisms of change as the intervention "tools" that make therapy effective. These are what we refer to here as the elements facilitating change. Essentially, they comprise the "what to do" piece of the formula for maximizing therapeutic change. In the

simplest of terms, these are the actual interventions used by any professional helper (e.g., reframing, building a relationship, teaching new skills, fostering insight, etc.). We know to a large extent about useful elements that, if implemented, may foster change in a client. Texts on psychological theory include a variety of these elements that are attached to particular theories (e.g., Prochaska & Norcross, 2002). More recently, the common factors of therapeutic change have taken the spotlight as a respectable place for clinicians to target their energy. Common factors are said to be those elements common across all different types of intervention and all classes of intervention theory that provide the groundwork for change (Ahn & Wampold, 2001; Sprenkle & Blow, 2004). Examples of common factors established as vehicles for change include client characteristics (e.g., motivation, readiness for change), therapist skill level, therapeutic alliance, expectancy (i.e., placebo factors) and nonspecific treatment variables, such as behavioral regulation, cognitive mastery, and affective regulation (Duncan, Miller, & Sparks, 2003; Hubble, Duncan, & Miller, 1999). These factors or "elements", as we refer, are useful because they provide a trans-theoretical framework to inform psychologists on "what" to do in therapy to facilitate change. Application of these factors to the actual therapy room is perhaps more clear than applying theoretical constructs into practice. That is, if a student clinician knows that the therapeutic relationship is important to build and foster for a change to occur, that clinician has something to focus on during therapy to guide practice. The "what" to do in therapy becomes more clear. This is the major contribution of common factors' literature. However, what remains after understanding common factors is the answer to "when" in the therapy process to focus on these various elements. This is discussed here.

18.4.2 Sequence of Implementation

When it comes to family issues (and arguably important to consider in the treatment of any issue), a competent clinician should probably consider the location in the therapeutic process with a given client. A useful question for child and adolescent clinicians to ask themselves is: Am I in the beginning phases, middle of therapy, or in the end of treatment with this client? Depending on the answer, appropriate interventions can be selected. For example, teaching new skills may be an effective vehicle for change when used after a client has already been engaged in the process, but may be highly ineffective if implemented in the first few minutes of a first session. Likewise, many authors suggest that there is a sequence of contingent mechanisms of change a therapist must be aware of and work toward providing it (Fraser & Solovey, 2007; Hill, 2004; Sexton, Ridley, & Kleiner, 2004). That is, some change mechanisms are important to attend to early in therapy and some are more important later. Also, some interventions or "tools" are useful across different phases of treatment, and some are critical at various points throughout the process. Therapeutic alliance is an example of a primary change mechanism (Bordin, 1979; Horvath & Greenberg, 1989). It seems that without doing this first (i.e., paying attention to and working toward a strong alliance as an early-therapy change mechanism), any subsequent intervention may not be effective. In addition, once alliance is established, it should be monitored throughout the therapy process. Knowing this fact about the therapeutic alliance gives the therapist a specific, early therapy goal to target and something important and specific to monitor throughout treatment.

Fostering insight (Hill, 2004) and teaching new skills (Fraser & Solovey, 2007) are examples of middle-of-therapy tasks that serve as mechanisms for change when implemented adeptly

and at the appropriate time. End-of-therapy change mechanisms may include teaching relapse prevention strategies and establishing strong networks of support to promote maintenance of change (Alexander et al., 1998; Fraser & Solovey, 2007).

Using the same case described above, it may become clear that attempting to teach the disruptive teen client or her mother new ways of relating to each other or solving their problems may not be effective in the early sessions of therapy. In fact, hinting that the teen must change and is to blame would likely decrease the chance that she would be willing to practice new skills at the therapist's suggestion. Undoubtedly, some understanding of the teen–mother relationship and each person's perspective on the problem would be a useful precursor to any advice or instruction regarding how to change their ways. In addition, the client in this case would not be able to prevent relapse of symptoms without first learning how to manage them within the relationship with her mother. The timing of these specific interventions to facilitate change is critical.

18.5 Evidence-Based Treatment Approaches

Within the field of clinical psychology, disagreement exists regarding what has been termed *best practice* (Sprenkle & Blow, 2004). There continues to be a lack of integration between research findings and clinical practice (Sexton, Alexander, & Mease, 2004), and it has been argued that this disconnectivity is due to the contrived nature of such clinical research trials. Although it is commonly known that family therapy is widely applicable and facilitates positive outcomes, clinicians continue to struggle with how to integrate research into their practice for working with families without compromising the art of the craft.

One area where this disconnectivity continues to thrive can be seen by examining attitudes of training clinicians toward evidence-based practice in psychology (EBPP). Luebbe, Radcliffe, Callands, Green, and Thorn (2007) conducted an online survey in which 1,195 training clinicians in graduate clinical psychology programs participated. The results indicated training clinicians are generally in favor of EBPP. However, those students who studied in programs that subscribed to a science practitioner or clinical science model were more likely than students from other training models (e.g., scholar practitioner model) to favor and utilize EBPP. It was also found that misunderstandings about what exactly constituted EBPP were common among the sample.

In conjunction with the results of the aforementioned study, we believe the reluctance to embrace treatments with supportive empirical evidence into therapeutic practice has something to do with the misunderstanding of semantics. In this chapter, we wish to promote evidence-based treatments. In stark contrast, we do not suggest therapists in training or others haphazardly apply what are known as empirically supported treatments (ESTs) without critical thought regarding the therapeutic relationship or client characteristics, as this can be particularly problematic. Luebbe et al. (2007) help clarify the difference between EBPP and ESTs when they state, "An empirically supported treatment is a product derived from randomized clinical trials…Evidence-based practice in psychology is a process that incorporates the retrieval and examination of the scientific evidence" (p. 645). Luebbe and colleagues go on to clarify that *evidence-based treatments* include not only treatments continually supported by means of randomized clinical trials but also to a collection of case studies, for example.

In 2006, the American Psychological Association Presidential Task Force on Evidence-Based Practice defined EBPP within the field of psychology as "the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences" (APA, p. 273). In other words, the Task Force urges trainees and licensed psychologists to first utilize treatment modalities supported by research to provide positive outcomes. In line with this thought, we provide a short review of evidence-based interventions that incorporate or utilize family interventions. ❯ Table 18.2 provides the reader with information regarding current interventions across individual, couples, family, and group therapy domains. Therapies chosen for this table were selected because they represent a variety of approaches that have considerable empirical support for their effectiveness, and all emphasize within their approach the relative importance of family issues. This list is by no means exhaustive, but rather serves as a quick reference for clinicians providing individual, couples, family, and group treatment as well as parent management training.

18.6   Basic Competencies of the Clinician

An important factor to highlight is the overwhelming demand for competent family-oriented therapists, including family therapists in the training sector. Training clinicians may be surprised to know that over 30% (n = 205) of the pre-doctoral and post-doctoral training centers listed on the Association of Psychology Postdoctoral and Internship Centers include a major rotation in family therapy (APPIC, retrieved October 2008). This finding highlights the necessity for acquiring basic competencies, at least, for a large portion of training clinicians. For this reason, we now turn to a discussion of building basic competencies in this domain including both conceptual and practical elements of basic competency development.

18.6.1 Conceptual Framework

The following have been established as eight core competencies in professional psychology: "Application of scientific knowledge to practice, psychological assessment, psychological intervention, consultation and interprofessional collaboration, supervision, professional development, ethics and legal issues, individual and cultural diversity" (Kaslow, 2004 and Kaslow et al., 2004 as cited in Kaslow, Celano, & Stanton, 2005, p. 338). Kaslow and colleagues (2005) provided a framework for principles to guide trainees in the development of these competencies within family psychology in particular. With regard to *applying knowledge to practice*, these authors recommended family-oriented trainees to learn about evidence-based psychological work that is grounded in systems theory. In the competency domains of *psychological assessment* and *psychological intervention*, Kaslow et al. (2005) again suggested a systems-oriented framework for developing clinical competency. They advised that students of family psychology should learn how to use measures that directly target systemic variables for individual, couple and family clients, including several of those mentioned earlier. For intervention that is systems-based, Kaslow and colleagues recommended training in comprehensive models of relationally oriented therapy.

In their summary, Kaslow et al. (2005) also addressed the *consultation and collaboration* competency by suggesting that students be trained in working across systems to facilitate

■ **Table 18.2**

Descriptive summary of evidence-based family therapy treatments

Treatment	Domain	Description	Reference
Behavioral Family Systems Therapy (BFST)	Individual/family	• Incorporates behavioral shaping, cognitive restructuring, problem-solving communication strategies as well as strategic/structural family therapy techniques to target weight problems, maladaptive eating patterns, and negative family interactions • Therapist works on a multidisciplinary team with a dietician and pediatrician to treat adolescents with anorexia nervosa, and parents are made an integral part of the multidisciplinary team to optimize family involvement and treatment gains	Robin et al. (1999)
Ego Oriented Individual Therapy (EOIT)	Individual	• Framework for working with adolescents with eating disorders • Focus is on strengthening ego functioning and insight in relation to eating issues • Empirically supported for producing positive outcomes with regard to depression, internalizing behavior problems, ego strength, maturity, fears, and perfectionism	Lock and Grange (2004)
Emotionally-Focused Couples Therapy (EFCT)	Couples	• Based on attachment theory and addresses problematic interaction patterns in the relationship by focusing on unresolved emotions from early parent–child interactions that may have resulted in insecure attachment styles	Johnson and Greenberg (1985, 1988)
Behavioral Marital Therapy (BMT)	Marital/couples	• Brief, time-limited, empirically supported framework for producing effective change in as few as three sessions • Interventions based on this framework focus on the couple's cognitive processes in treatment	Baucom, Shoham, Mueser, Daiuto, and Stickle (1998)

Cognitive Marital Therapy (CMT)	Marital/couples	• Empirically supported and manualized for the treatment of alcoholism and Posttraumatic Stress Disorder	Monson, Schnurr, Stevens, and Guthrie (2004), Wakefield, Williams, Yost, and Patterson (1996)
Brief Couples Therapy	Couples	• Supported as an effective framework for addressing substance abuse in the context of couple's treatment	Chaim, Armstrong, Shenfeld, Kelly, and Li (2003), Davidson and Horvath (1997)
Multisystemic Therapy (MST)	Family	• Empirically supported and manualized treatment for delinquent youth who are identified as abusing drugs and alcohol, behaving in a sexually offensive manner, or exhibiting other forms of antisocial behavior	Henggeler, Schoenwald, Borduin, Rowland, and Cunningham (1998)
Multidimensional Family Therapy (MDFT)	Family	• Hallmark of this framework is the implementation of an educational component for family members • Empirically supported for adolescent drug abuse and there is a manual specific to cannabis dependence	Liddle (2002, 2004)
Brief Strategic Systems Engagement (aka Family Effectiveness Training; FET)	Family	• Empirically supported for clinical work with immigrant Hispanic families with children (aged 6–12) exhibiting behavioral problems, anxiety, phobias, or experiencing parent–child communication problems	Szapocznik and Hervis (2001)
Functional Family Therapy (FFT)	Family	• Effective for reducing recidivism rates among high-risk adolescent and adult populations with a variety of problematic externalizing behaviors, including drug abuse	Alexander and Sexton (2002)
Structural Family Therapy	Family	• Framework for working with children diagnosed with eating disorders	Minuchin, Rosman, and Baker (1978)
Couple Communication Program	Group	• Marriage and family treatment provided in a group format • Focus is on building better communication skills	Butler and Wampler (1999)

◾ **Table 18.2 (Continued)**

Treatment	Domain	Description	Reference
Parent–Child Interaction Therapy (PCIT)	Parental	• Treatment is for children (aged 2–7) years who exhibit disruptive behaviors • Parents are taught skills that facilitate secure attachments, while children are encouraged to increase prosocial behavior and decrease negative behavior • Model is based on two stages: (a) child-directed interaction phase that resembles play therapy, and (b) parent-directed interaction phase that helps parents develop realistic expectations, limit setting skills, and consistency and fairness in disciplinary actions	Eyberg, Boggs, and Algina (1995), Eyberg, Nelson, Duke, and Boggs (2005)
Parent Training	Parental	• Family-based parent training program for managing child and adolescent behavioral problems, such as Attention- • Deficit/Hyperactivity, Oppositional Defiant, and Conduct Disorders • Manualized for clinicians working with teens and school-aged children are available	Barkley (1997), Barkley, Edwards, and Robin (1999)
The Incredible Years	Parental/child	• Evidence-based parent training program designed to prevent and treat early onset Oppositional Defiant and Conduct Disorders • A corresponding program, known as Dinosaur School, for kids (aged 4–8) facilitates direct intervention with the children by teaching social skills and problem solving skills and increases parent attendance	Webster-Stratton (2006)
Parent Management Training	Parental	• Behavioral treatment program that incorporates a corresponding psychoeducational component for parents of children with autism spectrum disorders • Focus is on teaching parents social learning and operant conditioning	Lovaas (1987)

solutions that are "in the best interests of the family" (p. 341). With regard to *supervision*, these authors urged family psychologists to provide integrative and relationally based guidance to supervisees and suggested that more research on family-oriented supervision is needed to establish supervisory competencies in family psychology. For establishing family psychology competency in *professional development*, Kaslow and colleagues advocated for trainees to broaden their self-awareness regarding personal familial and relational experiences. These authors also described how trainee personal awareness must be facilitated in an ethical manner with clear parameters set on the role of instructors and supervisors to encourage such growth and also maintain trainee privacy as well as the integrity and boundaries of the instructor–student or supervisor–supervisee relationship.

Ethical competencies proposed by Kaslow et al. (2005) for family psychology included the ability to navigate and address unique ethical situations in family work such as confidentiality constraints and handling multiple relationships within the family. These authors also emphasized the need for those training and working in family psychology to accurately represent their competency in this domain. Not surprisingly, Kaslow et al. (2005) also noted the importance of an integrative approach to training about *individual and cultural diversity* within family psychology. They described that family psychology competencies with regard to diversity are best developed in training and supervisory environments where trainees are encouraged to share their own perspectives regarding oppression, disability, spirituality, sexual orientation, and other diversity factors as a foundation for becoming open, systemically-oriented professionals.

Using this thorough framework for family psychology competency development, here we describe its application to the practice of family-oriented psychology. Though not identical to "family issues," we acknowledge that this summary of "family psychology" guidelines provides a reasonable foundation for our discussion of the treatment of family issues. The following paragraphs provide basic competency suggestions with an emphasis on the psychological intervention, professional development, ethics, and diversity domains of professional psychology competencies. Family-oriented suggestions in the assessment domain were made in previous sections.

18.6.2 Practical Suggestions Regarding Basic Competencies

As mentioned previously, the clinician has to learn intervention tools as well as critical thinking skills to achieve basic competencies in working with family issues. With regard to our earlier discussion on the importance of sequencing interventions, our description of tools to acquire for basic competency is reflective of those basic skills required throughout the therapy process. In addition, we discuss *when* in the therapeutic process these skills seem to be the most important in treating family issues.

Psychological intervention. First, any therapist hoping to be effective with youth and families must attain basic competencies in the areas described previously to complete any generalist-training program and be adept at practicing in professional psychology. The content of this section highlights particular skills as markers for particular competency in treating family issues. This is done with the assumption that generalist competencies are also acquired along the training pathway.

Firm grounding in a model to guide clinical work is essential for clinicians seeking competence in the treatment of family issues. We use the word "model" here to denote the importance of a family-oriented clinician adopting not just a systems-oriented theory about conceptualization, but a systems-sensitive and clinically instructive guide through the therapy process. The emphasis on therapists acquiring a model to guide clinical practice is seen in generalist texts (Fraser & Solovey, 2006; Hill, 2004), theoretical papers (Sexton, Ridley, & Kleiner, 2004), and specific treatment models (Alexander et al., 1998; Kanfer & Grimm, 1980). Such a model should include information on how the therapist moves clients through phases of therapy. General components of such models across their articulations include early process goals of engagement and development of alliance, middle-therapy goals of facilitating change through insight, behavioral activation, or cognitive restructuring, and later-therapy tasks of facilitating maintenance of change and relapse prevention (Alexander et al.; Fraser & Solovey, 2006). These models have in common an emphasis on sequencing intervention and matching it to unique client needs and symptoms. This allows for adequate structure and flexibility to guide the process and also shape therapy to best fit client systems. Instructors and supervisors of beginning clinicians treating family issues can assess for competency in this area by encouraging therapists to pay attention to where they are in the process of therapy itself to inform intervention with regard to both the sequence of therapy and the individual needs of the client.

Apart from grounding in a model like those mentioned above, facility with contextually oriented techniques is also a requirement for basic competency in the treatment of family issues. Reframing is a skill to be used throughout the process of therapy, but is perhaps the most important during engagement processes in the early phase of treatment. In work with youth and families, it is important to learn how to actually collaboratively redefine the presenting problem, each family member's perspective, individual feelings, thoughts and behaviors. This is the definition of reframing used here and suggested for basic competencies in the area of family issues. In addition, we support the Functional Family Therapy (FFT, Alexander & Sexton, 2002) suggestion that reframing itself is a process, and it should be practiced as such in therapy with family systems. Effective reframing often relies on the therapist seeing a more complicated, less negative definition of the problem than the client presents. In turn, it requires the therapist to hypothesize with clients about alternate ways of understanding their situation. Reframing as a process involves continuous co-construction of a new, collaborative understanding of problems on which further intervention is based. In addition, effective reframing relies on the therapist addressing his or her own barriers to seeing alternate definitions of client problems. If a therapist is unable to understand the client and his or her problems in a less blaming or shaming way than they are presented, the therapist will struggle to try to do so collaboratively with the client. With the assistance of their supervisors, beginning clinicians should learn to redefine the nature of the client's feelings, thoughts, and overall perspectives for themselves. This can provide the impetus for critical thought on the part of the new clinician and encourage therapist compassion for clients with complex, frustrating problems. A useful question for therapists to ask themselves might be: how do I understand this client's situation in a way that allows for hope that change can occur? In supervision, the answer may be derived from the therapist recalling what they have observed as important to the client and the strengths the client demonstrates.

A second area of focus for clinicians interested in gaining basic competency to treat family issues is *relationship-building skills*. While it sounds obvious, our experience suggests that

relationship skills must be acquired via training and practice rather than assuming to exist in our future psychologists. Youth and family clinicians must purposefully focus on how to build relationships with clients to be effective in facilitating therapeutic change. One of the most common mistakes beginning clinicians make is to hastily proceed into specific change interventions before developing a proper therapeutic alliance or setting an appropriate therapeutic structure to foster relationship building (Nichols & Schwartz, 2005). This often occurs because the beginning therapist feels disorganized and has anxieties about his or her competency level. Further, with all of the best intentions in mind, the beginning clinician often rushes through the most fundamental pieces of the therapeutic process with a strong sense of responsibility for the child and family's well being.

Apart from these reasons of new therapists "skipping" the relationship development process of therapy, we assert that many therapists do not have adequate relationship building skills; so they move quickly to the teaching or implementing of psychological strategies with the client, which, to be honest, is much easier. Building a relationship with individual or multiple people defined as "the client" requires management of bias, compassion, warmth, and complex listening skills. For beginning therapists, it is difficult to do all these relationship-building things at once, and to do them while also completing therapy milestones of assessment, planning treatment, and facilitating the maintenance of change.

While relationship-building skills are essential in the beginning of therapy, we argue that they continue to be of utmost importance throughout the course of therapy as well. In early sessions, a therapist must establish a working relationship with the individual client or each member of the client system. This may be done by engaging new clients in conversation regarding their interests, attending to their use of language and adjusting therapist language to match that of the client, and ascertaining motivations and values of the client to convey understanding. As therapy progresses and methods to produce change in the client are introduced, it is also crucial for the therapist to attend to the relationship with each member of the client system and maintain a strong relationship or respond to decreases in alliance in a manner that facilitates continuing progress.

A unique component of relationship building with regard to family members is the need to *balance* alliance when working with more than one person. It is essential for therapists working with couples, families or within any client relationships to realize that building alliance within a system of clients is different from doing so with an individual client. Relationship building must occur with each client in the room, and is often difficult to achieve in a balanced way, because therapists may align more with one client than another or absorb one family member's definition of the problem more easily. The FFT model of family therapy has, at it's foundation, an emphasis not only on relationship building skills for the therapist, but the ability to weave through the client system and work toward strong alliances with every member (Alexander & Sexton, 2002). This occurs over time and must be a constant focus of any therapist hoping to facilitate change in a client system. The reader is referred to this FFT reference for a useful description of balanced alliance.

The reader is also referred to our previous discussion of assessment of family issues at this point, as basic competencies in intervention for family issues include the recognition of relational dynamics and interactive styles of clients (Kaslow et al., 2005). With regard to interpersonal dynamics, one relevant marker for competency is whether the clinician observes and then attends to hierarchical structures in the client family system. In addition, clinicians treating family issues should become adept at intervening in a way that matches the client

tendencies to be connected to or distant from others in their relationships. Minuchin's (1974) structural family therapy is noted for emphasis on the importance of considering hierarchy and interpersonal closeness or distance in families. Other evidence-based models also take hierarchy and relational distance into account for planning family intervention (e.g., FFT, Alexander & Sexton, 2002).

Professional development, ethics, and diversity. In relation to the assertion made by Kaslow et al. (2005) that therapists must monitor their own professional development by becoming more aware of their own contexts, the self-as-instrument notion is the need to pay close attention to personal reactions when working with each family and its individual members. Commonly, clinicians of all competency levels feel a pull to identify with a single family member, and this is especially true when working with children and adolescents in inpatient settings (Schneider, 1985). Kaslow and colleagues (2005) suggest that beginning therapists conduct and share their own family genogram in supervision so as to identify their own family strengths and stressors, as well as highlight potential triggers when working with families. For a more comprehensive discussion about genograms, the reader is referred to McGoldrick and Gerson (1985).

Ethical practice in work with youth presenting family issues involves basic competency on the part of the clinician in recognizing the unique ethical challenges posed within systems-focused work. Confidentiality is an ethical principle that may become confusing to beginning family-oriented clinicians (Kaslow et al., 2005). Being aware of therapist duty to protect confidentiality for all those defined as "the client" is important in family therapy. Knowing when this becomes a challenge (i.e., when conducting individual therapy with children that necessitates involvement of parents) and seeking supervision on how to protect child privacy and also explain parents about the important treatment issues they should be aware of is critical. Again, supervisors can encourage therapists to note when confidentiality issues are less clear because of the multiple relationships and individuals within family systems. Supervisors can also purposefully target confidentiality and other ethical issues for focus in supervision and facilitate the development of clinical competency in this area.

Diversity considerations related specifically to the treatment of family issues include hierarchical and relational dynamics. The competent clinician should be adept at assessing these and intervening in a way that is respectful of the observed power differential within family systems and the subtle or obvious disparate amounts of connection or distance between family members. In addition, the general competency description of individual diversity (Kaslow, 2004) is relevant in the treatment of family issues. Reframing may assist the clinician in developing competency in truly understanding the client and his or her problems in a way that appreciates intrapersonal diversity as well as systems dynamics, in which the individual is embedded.

Although the previous paragraphs provide only a short list of the basic competency areas particularly relevant for treatment of family issues, they are grounded in generalist competencies and suggest a pathway to develop clinician strengths that will facilitate greater effectiveness in family-oriented clinical practice.

18.7 Expert Competencies of the Clinician

The American Board of Professional Psychology (ABPP, www.abpp.org) provides designations in specialty domains including family psychology. Qualifications and training required to

achieve such a designation are described as a beginning to our discussion on expert competencies in treating family issues. Two components of the ABPP designation requirements provide some parameters for defining expertise: extensive time dedicated to the area of desired designation, and evaluation by those already designated in the specialty area. Clinicians who have not dedicated extensive time via training and accrual of family-oriented internship and post-doctoral training are not considered for such a designation. In addition, failure at examination by other ABPP family psychology designees is a symbolic and concrete instance of how the label of expert is granted or withheld. Thus, these accepted standards hold quality of experience, time of dedication, and performance under review of other experts as indicators of expertise.

In addition to this framework for determining expertise, we suggest here that expert competencies of clinicians treating family issues are not altogether different in content than basic competencies. Instead, the marker of an expert in this area is higher level of facility with those basic skills. For example, the expert clinician would need to be adept at reframing, attending to relational dynamics, and in other areas mentioned earlier. However, expertise would be marked by the clinician's ability to practice these skills with a degree of efficiency and automaticity that a clinician at a basic level could not. In addition, someone reaching expert level competency in the treatment of family issues may intervene in a contextually cognizant way without the use and guidance of a supervisor to do so. Whereas the clinician with basic competency might be able to build relationships with family clients after using supervision to discuss how to do this, the expert would likely demonstrate automatic and immediate facility in responding to the multiple interpersonal dynamics operating in family systems practice. These are markers for expertise in the psychological intervention domain of core competency.

With regard to professional development, experts may not depend on supervision to guide their moment-to-moment practice in sessions, but may be so aware of their own contextual background that they seek consultation for specific, systems-oriented questions from a colleague who has expertise in family issues intervention. Experts would be more likely to seek supervision that is focused on systems processes and the complexities of intervening in a contextually appropriate way. Novice therapists treating clients with family issues may understand the systemic implications if told, but may not have the practice and self-awareness to raise this type of systems-specific question in supervision and consultation.

18.8   Transition from Basic Competence to Expert Competence

Our suggestions for moving from basic to expert competencies in the treatment of family issues are explicitly stated as follows: get intensive, focused training and supervised experience. With regard to family issues and their treatment, this means expertise is developed within settings serving this group that are capable of providing intensive training and supervision in putting principles of systems into practice. In all instances, the student must actively seek out this level of experience and dedicate a substantial amount of time (e.g., practicum experience, additional training, and supervision meeting attendance). Also, this is very different from simply gaining experience with families or with a supervisor who has family issues experience and an orientation that is systems-conscious. We maintain that just getting experience does not foster expert competencies without the intense focus and supervision in a particular area or with a particular model of treatment. Live supervision may be particularly useful for facilitating competence (Kaslow et al., 2005).

Unfortunately, many students are eager to learn and easily "thrown in" to see complex individuals, couples, and families. While this constitutes experience, it can actually damage competence and cause harm to clients if the student is not monitored properly in the areas described above, which are the basic skill domains for the family issues-focused clinician. In addition, it can increase clinician self-doubt or clinician over confidence, neither of which constitute the makings of an expert. We hope it has become obvious at this point that moving from basic to expert competencies does not just "happen." It occurs only as a result of purposeful choice and determination on the part of the trainee interested in becoming an expert in the area of family issues. The choice begins with placing oneself in an environment that can provide such intensive training, supervision, and experience.

It may happen that the doctoral training clinic is such a setting. As in the case of the first author (AW), movement from basic competencies was facilitated by active participation with a faculty mentor who also provided training to community agencies about how to conduct a specialized treatment for youth. Through this relationship, AW was able to train and practice with families in a setting where sessions were recorded, treatment integrity was monitored through supervision, and multiple trainings were available. With time and improved competence, as measured by the supervisor and through clinical outcomes such as returning clients and high client-reported treatment adherence, AW was then promoted to supervisor, and eventually trainer throughout the course of her doctoral program and into postdoctoral years. From this experience, we note the relative utility of training and supervising others as a facilitator of greater competence in systems-oriented clinical work. It should be noted that markers of basic competence should be evaluated as met prior to thrusting a novice family-oriented clinician into a training or supervisory role.

In most instances, the level and amount of training and supervision required to become an expert in the treatment of family issues is accessed outside of the graduate training facility or apart from work with program faculty. This type of opportunity can be accessed as part of a practicum, internship, and postdoctoral experience in a public or private agency that has acquired certification in a particular systems-based intervention strategy (i.e., several of those listed above). This implies the interested person in training must look for agencies or other settings that practice the systems-oriented intervention and have the staff to supply the training in their area of choice. An application for a position usually follows. For the application process to go smoothly, the applicant must have acquired some previous experience and demonstrated interest in the area. In addition, interviewing and working in such a setting may require sacrifices such as moving to the area providing the training. Being flexible is essential to obtain experience. Becoming an expert in this area requires creativity and foresight, as well as the personal and professional choice to dedicate time and resources to acquire expertise.

Having planned to gain access to an expertise-developing environment, it is wise for the clinician interested in becoming highly competent to take advantage of every training opportunity available in work specific to families and youth. It is suggested that the intensive experience in training, practice, and eventually supervision should be centered on one particular intervention model versus several less structured or intensely trained and supervised "models" of how to work with youth. Diversifying early in training can lead to confusion versus expertise. The utility of the one-model focus is that, if the model is well grounded, it can instill in the clinician a set of principles to guide practice-even practice with different populations.

Becoming an expert systems-oriented clinician is also facilitated by the clinician graduating to become not just a therapist, but a supervisor and trainer in the area of treatment for family issues. As an educator, and one who gained expertise by moving from therapist to supervisor to trainer in a family therapy model, AW can attest to the essential refining of intervention skills and critical thinking with regard to family issues that occur when teaching others and critiquing their work. Again, supervising others and training novice family-oriented clinicians is not an activity for the aspiring expert to just "do," but can facilitate movement from basic to expert competencies when done in an environment that provides mentoring and supervision after a clinician has mastered basic skills and demonstrated therapeutic effectiveness in this area.

Along with the sequence of events suggested for becoming an expert clinician in this area, we recommend the clinician seeking expertise in treating family issues attend professional conferences and gain membership to some of the organizations that support and inform clinicians in this area. We recommend the aspiring expert to consider joining and attending affiliated organizational conferences, meetings and trainings: Society for Family Psychology (Division 43, American Psychological Association, www.apa.org), and the American Association of Marriage and Family Therapy (AAMFT, www.aamft.org). There are several others that vary in attention to clinical skills, research, training, and theory with regard to psychology and family issues. These two organizations and their members have solid histories of appreciation for the complexity of family issues and a priority on welcoming like-minded professionals to expand their effectiveness in psychological treatment in this area. As such, they provide a strong base for affiliation from which the aspiring expert may expand his or her professional network and clinical breadth.

18.9 Summary

To facilitate the use of tools and principles of critical thinking discussed regarding training in and treatment of family issues, our summary is presented as a review of main points to take from each of the sections of this chapter. Together, these provide the pathway for students to develop expertise in this area of treatment for children and adolescents and a road map for instructors to guide trainees.

First, we encourage trainees and their instructors to acknowledge both the values and the limitations inherent in their generalist training programs. Specifically, they may find that entertaining the following assertions is helpful for approaching family issues as a treatment focus: (a) problems are relational in nature; (b) severity and importance of family issues are defined by their impact on functioning; (c) individual problems have an impact on multiple levels of an individual's context and within his or her family system; (d) "family" must be defined to be inclusive of the client's perspective and circumstances; (e) in pursuing expertise, be reminded always that skills or "tools" must be supplemented by critical thinking that is systems-oriented and considerate of diversity.

Next, we underscore the importance of education in systems theory and contextual risk factors, training in a particular model of clinical change, and supervision that encourages relationally focused assessment and intervention for trainees to develop competencies that increase their effectiveness in working with family issues. Throughout a trainee's development in becoming more adept at treating family issues, we urge supervisors to focus specifically on

ethical issues unique to working with families. There are established professional organizations and standards to be relied and that inform training pathways in this regard (Kaslow et al., 2005).

The pathway to expert competency in the treatment of family issues is composed of creating and taking advantage of opportunities for focused training and supervision in work within contexts that are systems-oriented. This requires forethought and dedication on the part of the trainee as well as extra work outside generalist program training requirements. Basic competencies may be measured using the parameters of general clinical competencies in clinical psychology with attention to additional, unique factors pertaining to the complicated skills and techniques required for effective work within family systems. Expert competencies may be developed through the acquisition of supervisory and training roles, and through extensive, intensive, focused training in systems-oriented intervention and conceptualization. Current guidelines for ABPP in family psychology provide a useful framework for expert competency domains and highlight that expertise includes a high level of automaticity and efficiency uncharacteristic of therapists with entry-level competence in the treatment of family issues. While further iterations of the pathway to clinical competency and effectiveness regarding the treatment of family issues are needed, current literature and elements of the summary provided here comprise a strong foundation for trainees and educators.

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19 Academic Problems

James K. Luiselli · Derek D. Reed · Brian K. Martens

Abstract: Many school children have academic problems. We describe contemporary methods for assessing learning difficulties and properly identifying remediation strategies. Evidence-based treatment approaches include procedures for motivating student performance and eliminating conditions that are associated with academic failure. The chapter reviews basic clinician competencies such as conducting consultation with educational personnel, performing curriculum-based measurement, and implementing functional behavioral assessment. Our discussion about expert competencies centers on an understanding of the social influences on consultation, developing expertise in brief experimental analysis, and acquiring advanced skills through post-graduate education, professional activities (speaking, writing), and peer supervision.

19.1 Overview

Each year millions of children enter the American educational system hoping to acquire the academic skills needed to become productive members of the society. Although the majority of these children demonstrate sufficient mastery of the curriculum to succeed at each grade level, many students do not. The National Center for Education Statistics (NCES, 2004) reported that approximately 37% of the nation's fourth grade students and 26% of eighth graders were below the basic level in reading. These percentages were higher for African American and Hispanic children (60% and 56%, respectively) and for children who qualified for free/reduced-price lunch (55%; Martens et al., 2007). Percentages were also high with respect to mathematics, with 23% of fourth graders and 32% of eighth graders being below the basic level. According to the National Assessment of Educational Progress scoring rubrics, the category "below basic" means that children lack even "partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade" (NCES, 2004).

Most children who exhibit academic problems in school are neither formally identified with a disability nor receive special education services. Rather, these children (referred to as low achievers) benefit from regular class instruction just enough to avoid special class placement. Over time, however, low achievers fall farther and farther behind their peers as gaps in their skills accumulate and demands of the curriculum increase. In the absence of an effective intervention, at some point, low achievers fall far enough behind their peers to qualify for special education services as students with disabilities. This situation has been termed "the problem of cumulative dysfluency" (Binder, 1996, p. 183), and explains in part why placement in special education has been criticized as a "wait to fail" model that delays services and reduces their effectiveness (Vaughn & Fuchs, 2003).

While a small percentage of students receiving special education services are classified as severely disabled (between 1% and 2% of the school-age population; Reschly, 1988), approximately 10% of students nationwide are classified as having a "mild" or high incidence disability. Included among these high incidence disabilities are the categories of learning disabled, speech/

language impaired, mildly mentally retarded, and emotionally disturbed. More than 85% of all students with disabilities receive a high-incidence classification, with learning disabled as the most prevalent designation (Reschly, 2004). In fact, the number of children diagnosed with a learning disability as a result of severe academic problems has increased more than 35% since 1977 (compared with a 24% population increase), and these children now comprise approximately 52% of all students with disabilities (U.S. Department of Education, 2000; Vaughn & Fuchs, 2003).

Chronic academic problems have important social consequences for children both in school and later in life. Early school failure has been linked to peer and teacher rejection, conduct disorders, and high school drop-out, as well as adult underemployment and criminal behavior (Martens & Witt, 2004; Patterson, Reid, & Dishion, 1992; Snow, Burns, & Griffin, 1998; Walker, 2004). Given the prevalence of children's academic problems and the implications of such problems for life-long success, the need for effective instructional practices in our schools has never been greater.

This chapter addresses competencies of clinical psychologists who design interventions to address children's academic problems. We focus on principles of behavior analysis and behavioral skill instruction (e.g., stimulus control) that can be applied to a variety of academic skills and have received considerable support in both basic and applied research (e.g., Daly, Martens, Barnett, Witt, & Olson, 2007). Toward this goal, we begin this chapter with a discussion of categorical versus dimensional models of service delivery in schools, and describes assessment strategies used to diagnose academic underachievement within each model. Consistent with the dimensional model, we then describe principles that underlie behavioral approaches to academic skill instruction and outline an approach for identifying potential causes of academic problems as instructional antecedents and consequences. We then describe evidence-based strategies for treating academic problems based on this approach, followed by a discussion of basic and expert competencies required for clinicians to apply these strategies in schools and other child-related settings. We conclude the chapter with recommendations that clinicians may find helpful in the transition from basic to expert competency.

19.2 Recognition of Symptoms and Their Assessment

What constitutes academic underachievement? This is a complex question, and two competing models for answering this question currently exist side by side in schools. Each of these service delivery models has its own set of assumptions, and these have led to very different approaches to assessing and treating children's academic problems.

The first model, termed a *categorical* model, continues to dominate school-based service delivery and is based on the assumption of qualitative differences between children classified as handicapped and their typical peers (e.g., Hynd, 1988; Kavale, 1990; Reschly, 2004). These differences are assumed to reside within the child, to be relatively stable over time, and to be a result of poor academic performance (Martens & Ardoin, in press). When diagnosing children's academic problems, advocates of this model focus on the assessment of psychological attributes, traits, or constructs believed to underlie classroom performance. This typically is accomplished by administering one or more standardized, norm-referenced tests which allow children to be compared with their same age or grade peers on measures of general achievement and related abilities (e.g., intelligence, verbal memory, and receptive vocabulary) (Reschly, 2004).

Guidelines for using test scores to determine whether children are eligible for a disability classification are contained in federal legislation known as the *Individuals with Disabilities Education Improvement Act* (IDEIA) first passed in 1975 as the *Education for All handicapped Children Act* (P.L. 94–142). Each state has its own set of additional regulations for making eligibility determinations, but these must be consistent with federal legislation. Two disability categories that are particularly relevant to children exhibiting severe academic problems are "learning disabled" and "mildly mentally retarded." According to federal guidelines, children may be classified as learning disabled based on the evidence of a disorder in one or more of the basic psychological processes involved in any of the major academic skill areas (e.g., reading, writing, spelling, or math). Currently, this determination can be made using either of the following two approaches. The first approach involves obtaining a significant discrepancy between scores on individually administered tests of intelligence and achievement (i.e., a one-to-one and a half-standard deviation difference). The second approach, which was included in the 2004 amendments to *Individuals with Disabilities Education Improvement* Act (IDEIA, P.L. 108–444), allows children to be classified as learning disabled when they fail to make sufficient progress to meet grade-level standards after receiving a research-based intervention. Satisfactory progress is evaluated based on a dual-discrepancy criterion, in which a child's academic performance is compared with that of peers in terms of both level and slope of improvement (Burns & Senesac, 2005).

IDEIA regulations stipulate that children may be classified as mentally retarded based on the evidence of significantly below-average intellectual functioning concurrent with deficits in adaptive behavior. Significantly below-average functioning in each of these areas is typically operationalized by scores less than one standard deviation below the mean (borderline), less than two standard deviations below the mean (mildly mentally regarded), and less than three standard deviations below the mean (moderately or severely mentally retarded).

Providing services to children under the categorical model has historically involved a series of steps known as the *refer-test-place sequence* (Erchul & Martens, 2002). Within this sequence, children are first identified as needing services by their regular education teacher based on observations of chronic or severe academic failure. The child is then *referred* for evaluation by a multidisciplinary team of support personnel, who evaluate the child in each area of suspected disability using batteries of standardized tests supplemented by classroom observations, interviews, and reviews of educational records as needed (*test*). Once the evaluation is complete, the team determines the child's eligibility for services under one or more disability classifications, recommends appropriate placement options, and identifies target areas for remediation. Following review and approval of these recommendations by representatives of the school district and the child's parents, the child is *placed* with a special education teacher for some or all of the school days, and this person provides the extra instruction needed to address the initial referral concern. Each person involved in the refer–test–place sequence is responsible for a different aspect of the child's case, and this allows the assessment and treatment of academic problems to occur independently of the regular classroom context in which those problems were initially observed (Martens & Ardoin, in press).

Despite its widespread use, the categorical model of service delivery has been criticized on a number of grounds including the high cost and delay in receiving the special education services that result from pre-placement evaluations (twice the cost of regular education; Reschly, 1988), the questionable value of norm-referenced ability tests used in pre-placement evaluations to inform treatment design (Gresham, 2006; Gresham & Gansle, 1992), lack of

differential treatment based on differential classification (Ysseldyke, Christenson, Thurlow, & Bakewell, 1989), and the limited effectiveness of special class placement (Kavale, 1990). Problems with this model have led to increased adoption of a dimensional model of service delivery, and it is this latter model which forms the basis of the strategies recommended in this chapter.

The *dimensional* model assumes that children's skills, abilities, and behavior fall on a continuum that approximates a normal distribution. By definition, most children (68%) will fall in the average range on any measured performance variable, with academic achievement dropping incrementally to a point about 2–3 standard deviations below the mean (Reschly, 1988). In this model, differences among children at adjacent points in the distribution (e.g., learning disabled versus low achiever) represent "differences of degree not kind" (Reschly, p. 462). This position has been supported by research showing that low achieving students differ from those classified with a high incidence disability (i.e., as learning disabled) based on their degree of underachievement but not the presence of physical symptoms, biological anomalies, or even intelligence-achievement discrepancies (Fuchs, Mock, Morgan, & Young, 2003; Merrell & Shinn, 1990; Reschly, 1988).

Rather than searching for underlying ability differences that correlate with academic performance, the dimensional model focuses on the assessment of academic performance itself. Assessment strategies used in this model tend to be more "direct," in that they assess the actual academic behavior of concern at the time and place of its natural occurrence (Cone, 1977). Two direct measures commonly used to diagnose academic performance problems in the dimensional approach include systematic observation of classroom behavior as well as curriculum-based measurement (CBM) probes in reading, writing, and math (Ardoin et al., 2004; Shinn, 1989; Volpe, DiPerna, Hintze, & Shapiro, 2005).

Although a variety of observation codes exist for assessing children's classroom behavior (Shapiro, 2004a), they have several features in common. First, each code defines several categories of students' on-task (e.g., active engaged time, school work, and responding to teacher) and off-task (e.g., motor movements, out of seat, and peer interaction) behavior. Some codes also define instructionally relevant categories of teacher behavior such as teacher-directed instruction or teacher approach to the child. Second, presence or absence of children's behavior within these categories is recorded within brief intervals of time (e.g., 15 s) using partial-interval or momentary time sampling methods. Third, many observation codes require the observer to record the behavior of randomly chosen, nontarget peers in addition to the target child for comparison purposes. Generally speaking, children who show levels of on-task behavior that are low (e.g., less than 80% of intervals) and below that of their typical peers are likely to be at risk of academic performance problems.

CBM (Shinn, 1989) is a direct approach to assessing children's academic performance that requires children to make production rather than selection responses within the context of actual curricular tasks or curriculum-like tasks (e.g., reading passages from a basal curriculum, grade-level math computation sheets). Production responses involve rate measures of free-operant behavior and as such combine the performance dimensions of accuracy and fluency (e.g., words read correctly per minute, digits written correctly per minute). Brief, curriculum-based measurement probes (e.g., 1 min of reading aloud, 2 min of math computation) have been shown to be reliable and valid measures of global achievement, are sensitive to short-term instructional intervention, and can be used for long-term academic progress monitoring (Hintze, Daly, & Shapiro, 1998; Shinn, 1989). Because they can be administered repeatedly,

scores on curriculum-based measurement probes can be used to make both normative (e.g., screening) and idiographic (e.g., progress monitoring) comparisons. The former are often used to diagnose academic performance problems, and many schools routinely collect schoolwide curriculum-based norms, against which the reading fluency of target children can be compared (Ardoin et al., 2004). Instructional placement standards also exist for CBM based on larger, national samples. For example, students are considered to be at a frustrational level in third to sixth grade material if they read fewer than 70 words correctly per minute with six or more errors (Shapiro, 2004b).

A second important assumption of the dimensional model is that similar variables are assumed to affect children's achievement and behavior at all points in the distribution. Unlike the categorical model, these variables are external to the child, include teachers' planning, instructional, managerial, and evaluation practices, and have been shown to be causally related to student achievement (Christenson & Ysseldyke, 1989; Martens & Witt, 2004). Thus, whether one is talking about deficient self-help skills in an adult with developmental disabilities or poor oral reading fluency in a typically developing third grader, the same conditions are assumed to have contributed to the problem (e.g., inadequate instruction), and the same principles can be used to solve the problem (e.g., practice with modeling, prompting, corrective feedback, and reinforcement) (Daly et al., 2007). Thus, in the dimensional model, assessment focuses on the interaction of children's skills and teachers' instruction. Although this requires the majority of assessment activities to be conducted in children's natural classroom environments (e.g., systematic observation), information collected during the assessment process is directly related to intervention design.

19.3   Maintenance Factors of the Disorder or Problem

Fundamental to the effective remediation of academic problems is a focus on what we can see children *do* rather than on what we assume they *know* (Daly, Lentz, & Boyer, 1996; Martens & Witt, 2004). Focusing on what children do allows the measurement of the performance of any skill over time and under different conditions in terms of accuracy (e.g., percent correct and errors) and fluency (e.g., correct rate per unit time). Rate measures of responding (i.e., fluency) are particularly useful because of their sensitivity to individual (e.g., fatigue, illness, and ability) and environment (e.g., setting, instructor, and reinforcement) variables and therefore are widely used in applied behavior analytic research (Johnston & Pennypacker, 1980). It is only by closely monitoring the dimensions of performance that we can relate changes in academic responding to the antecedents and consequences of their occurrence (Daly et al., 2007). Moreover, lawful principles exist for describing observed relationships between academic responding and the conditions surrounding its occurrence (i.e., principles of operant conditioning), and these principles can be exploited to both diagnose and treat academic performance problems.

Key to the understanding of how academic responding improves with training and instruction are the principles of *stimulus control* and *stimulus generalization*. Stimulus control involves bringing an academic response (e.g., saying the word "cat") under the control of target instructional stimuli (e.g., seeing the printed letters c-a-t) (Daly et al., 2007). Stimulus control develops gradually over time through the use of instructional procedures that (a) call the learners' attention to cues which signal when a correct response will be reinforced (i.e., discriminative

stimuli) and (b) differentially reinforce correct responding in the presence of these stimuli (Lannie & Martens, 2008; Wolery, Bailey, & Sugai, 1988). Stimulus generalization involves an increase in the range of instructional stimuli that control academic responding, and develops when responding is reinforced in the presence of varied or more naturalistic discriminative stimuli or in the presence of discriminative stimuli in more complex contexts. Principles of stimulus control and stimulus generalization underlie all forms of skill training. Moreover, these principles represent an instructional sequence in which accurate and fluent responding is first established, brought under control of key instructional stimuli, strengthened through practice in the presence of these stimuli, and then systematically programmed to occur when these stimuli are varied or occur in different contexts.

Daly, Witt, Martens, and Dool (1997) proposed a useful model for diagnosing academic performance problems based on the two principles described earlier. Specifically, this model allows one to examine deficits in academic responding as a function of insufficient instruction needed to establish, strengthen, or program for the generalization of stimulus control. These various "gaps" in a child's instructional history are summarized by five reasons children may respond incorrectly to curricular demands: (a) they don't want to do it (i.e., reinforcement for correct responding is insufficient or lacking), (b) they have not spent enough time doing it (i.e., prior instruction did not contain enough practice to strengthen stimulus control), (c) they have not had enough help to do it (i.e., prior instruction did not establish stimulus control through modeling, prompting, and corrective feedback), (d) they have not had to do it that way before (i.e., there were no prior systematic attempts to program for stimulus generalization), and (e) it's too hard (i.e., student responding consists mainly of errors as a function of overly difficult material).

19.4 Evidence-Based Treatment Approaches

Daly et al. (1996) defined academic intervention "as the process of eliciting academic responses in a more deliberate and explicit manner beyond those types of responses currently elicited by the natural classroom environment" (p. 382). As discussed previously, academic problems can occur as skill or performance deficits. In turn, these deficits are influenced by antecedent and consequence events during instruction and test situations. The challenge to school-based clinicians is to isolate sources of control over these deficits, formulating functionally relevant intervention procedures, and evaluating outcome through objective measurement of academic responding.

Haring, Lovitt, Eaton, and Hansen (1978) proposed the Instructional Hierarchy (IH) as a model for "identifying instructional procedures that could reliably improve performance at different levels for a variety of skills" (Martens & Eckert, 2007, p. 83). In effect, the IH informs intervention by tailoring behavior-change procedures along a continuum of student learning objectives. The first stage of the IH is *acquisition*, by which a student first learns an academic skill and demonstrates it accurately in the context of a curricular task. The second stage, *fluency*, requires that a student exhibit accurate responding with speed and proficiency. Next, the IH targets *generalization* of academic behavior to settings and contexts where it is expected. The final stage of the IH, *adaptation*, represents a student showing that she/he can modify what was learned when confronted with unfamiliar environmental demands.

Selecting academic intervention procedures according to the IH requires proper measurement at each of the four stages. Haring et al. (1978) advised direct daily measurement of

academic task performance as an essential component of intervention evaluation. The combination of continuous data-based measurement aligned with IH stages can be viewed as a *functional assessment and analysis* of academic responding (Daly et al., 1996).

In what follows, we describe several evidence-based academic intervention procedures. Referencing the IH, we focus on acquisition, fluency, and generalization targets. Each target is also described relative to antecedent and consequence procedures. Antecedent intervention refers to instructional methods that *precede* academic responding (Luiselli, 2006). Various cueing, prompting, and previewing strategies qualify as antecedent intervention. Consequence methods, most commonly positive reinforcement and error correction, are applied contingent on academic responding. As illustrated in the research literature, most academic intervention programs combine antecedent and consequence procedures as a "treatment package."

Interspersal training. Academic task difficulty itself is an antecedent variable that can be manipulated to change behavior. For example, Gilbertson, Duhon, Witt, and Dufrense (2008) measured on-task behavior and digits correct per minute (DCPM) of fourth grade students who had poor mathematics performance. During independent seatwork in their classrooms, the students were presented with high-difficulty tasks, moderate-difficulty tasks, and low-difficulty tasks. Using CBM, the degree of task difficulty was set individually with each student. All of the students had the highest percentage of on-task behavior and the highest DCPM in response to low-difficulty tasks.

Students also may display more challenging behaviors when they are confronted with difficult as opposed to easy assignments (Weeks & Gaylord-Ross, 1981). Behaviors that interfere with learning include verbalizing out-of-turn, throwing materials, disrupting peers, and getting out-of-seat. These and similar behaviors interfere with instruction, acquisition of skills, and academic productivity. By modifying task difficulty, it may be possible to reduce problem behaviors without more intensive intervention (Friman & Poling, 1995).

To manipulate task difficulty as an academic intervention, the challenging features of instruction must be identified. Some students struggle with learning and performance, because the subject matter is too advanced, task requirements are not explained clearly, or work effort is excessive. Once the source of task difficulty is confirmed, student learning can be improved by interspersing easy tasks with more difficult tasks. Essentially, this procedure entails establishing a ratio of "knowns" and "unkowns" (Gickling & Armstrong, 1978), starting with a combination that produces the strongest positive effect, and then gradually adding more "unknowns" without diminishing success. This may be illustrated as follows. A student may be able to accurately complete a 12-problem mathematics worksheet when all of the problems are "easy." Interspersal training could be accomplished by changing the worksheet to include ten "easy problems" and two "moderately difficult" problems, then eight "easy" problems and four "moderately difficult" problems, and so on until the student is consistently successful at the highest possible level of difficulty.

Modeling, previewing, and prompting. Showing students how to perform an academic behavior and then giving them help as required represents modeling and prompting procedures, respectively. Say, for example, that a teacher asks a student to read words printed on "flash" cards. Modeling would consist of the teacher displaying cards to the student and reading the words correctly before requesting a response. Prompting might consist of the teacher pointing to the first letter of each word or assisting the student with "sounding out" the words. These procedures have the objective of increasing the probability of accurate responding in the presence of a discriminative stimulus.

"Cover-Copy-Compare" (CCC) is a mathematics academic intervention that incorporates modeling with other instructional procedures (Skinner, Bamberg, Smith, & Powell, 1993). CCC has a student look at a mathematics problem showing the answer (the modeling component), and then cover the problem with the answer, record the answer, uncover the problem with the answer, and compare the answer. Typically implemented as a self-managed intervention, CCC addresses both acquisition and fluency objectives for a variety of mathematics calculation skills.

Previewing enables students to perform an academic activity that will be presented to them subsequently in an assignment or test situation. In a study with four 8–11-year-old students who had learning disabilities, Daly and Martens (1994) evaluated the effects of three preview methods on oral reading of sight words and narrative passages. The *student passage preview (SPP)* had students read passages without assistance, the *listening passage preview (LPP)* allowed students to listen to passages on audiotape while following along with their fingers, and with the *taped words preview (TWP)*, students read along with the audiotape. Although reading accuracy and fluency improved with each procedure, *LPP* was associated with the most robust performance improvement. Consistent with the IH conceptualization, "the strength of the LPP intervention lies in the combination of modeling plus drill under criterion stimulus conditions for the target academic behavior of oral reading" (Daly & Martens, 1994, p. 467).

Practice, performance feedback, and positive reinforcement. When an academic behavior has been acquired with acceptable accuracy, it is possible to build fluency by giving students opportunities to practice their skills. In many cases, simply scheduling brief and frequent "drills" during the school day is sufficient to strengthen fluent responding (Skinner, Belfiore, Mace, Williams-Wilson, & Johns, 1996; Skinner, Fletcher, & Henington, 1996).

Scheduled practice sessions typically are combined with other procedures, usually performance feedback and positive reinforcement. With performance feedback, a teacher informs students about their academic activity. Feedback can be implemented verbally (e.g., "Bill, you had ten correct and one incorrect on the worksheet."), in writing, or visually through graphic display (Shapiro, 2004b). Feedback also can be adapted to the type of academic task such as the number of completed assignments (Kastelen, Nickel, & McLaughlin, 1984), total answers produced (Van Houten & McKillop, 1977), or digits correct and incorrect per minute (Codding, Eckert, Fanning, Shiyko, & Solomon, 2007). Performance feedback is optimally effective when it is behavior-specific (i.e., it describes what a student has done) and is delivered immediately following completion of an academic activity.

Positive reinforcement, which by definition must be contingent on behavior, is highly effective in increasing academic engagement, accuracy, and fluency. Despite admonitions of the lay public (Kohn, 1993), "rewarding" academic performance does not undermine motivation and success in school (Akin-Little, Eckert, Lovett, & Little, 2004; Eisenberger & Cameron, 1996; McGinnis, Friman, & Carlyon, 1999). The key to using positive reinforcement most effectively is to "match" it to each student's preferences, present it consistently following desired performance, deliver it frequently, and over time, teach a learner to delay gratification by gradually increasing the time between receipt of reinforcers (Berkowitz & Martens, 2001; Neef & Lutz, 2001; Northup, George, Jones, Broussard, & Vollmer, 1996). Allowing students to earn tangible objects, tokens that can be exchanged for preferred activities, and home-based rewards are some of the reinforcers that can be included in an academic intervention. It should be noted that positive reinforcement could be programmed for individual students or through a group contingency that is applied classwide.

Error correction. When students make errors during instruction, teachers usually prompt the correct response. This behavior-contingent consequence can be implemented in different ways depending on the academic assignment and method of error correction. For example, Barbetta, Heron, and Heward (1993) demonstrated that students learned, maintained, and generalized sight-word reading when they repeated the correct word that was modeled by the teacher following an error when compared with simply attending to the correct word without repeating it. In another study, Barbetta et al. (1993) found that sight-word reading was more accurate when students were required to repeat the whole word following an error, instead of repeating the initial sounds of whole words.

It appears that error correction can be an effective academic intervention when it is both relevant (e.g., correctly spelling or reading words from tests) and irrelevant (e.g., correctly spelling or reading non-test words) to an instructional activity (Axelrod, Kramer, Appleton, Rockett, & Hamlet, 1984; Cuvo, Ashley, Marso, Zhang, & Fry, 1995). Furthermore, using response repetition as an error correction procedure during sight-word instruction, Worsdell et al. (2005) reported that when compared with single repetition of correct words, multiple repetition of correct words resulted in more cumulative words mastered, more words read correctly, and better post-instruction maintenance. Worsdell et al. also showed that the multiple repetition procedure was better when it was contingent on every incorrect response instead of an average of every third incorrect response. Additionally, research by Bennett and Cavanaugh (1998) found that *self-correction* by student following errors can facilitate learning when it is immediate but not delayed.

19.5 Mechanisms of Change Underlying the Intervention

Each of the academic interventions we reviewed influences behavior in similar and different ways. Positive reinforcement principally addresses motivation by programming incentives for learning. Poor motivation is evident for many students who resist difficult academic assignments or appear disinterested in specific content areas such as mathematics, reading, and language arts. Improving motivation through positive reinforcement occurs by making pleasurable consequences contingent on performance objectives that are negotiated between student and teacher. As students successfully contact positive reinforcement with regularity, their skills are strengthened.

Effectiveness of positive reinforcement depends on the assessment of individual student preferences. That is, what is considered pleasurable by a teacher may not, in fact, be pleasurable for a student. Therefore, students should be asked about their preferences before designing an academic intervention that incorporates positive reinforcement. Because preferences can shift over time, it is also critical to inquire about them routinely and not rely on a one-time assessment. Magnitude, or the quantity, intensity, and duration of reinforcement, is another parameter that must be considered, because it can influence response rate (Hoch, McComas, Johnson, Faranda, & Guenther, 2002). Finally, too much access to reinforcers (satiation) or too little access to reinforcers (deprivation) can affect motivation such that desirable behaviors decrease and increase, respectively (Friman & Hawkins, 2006).

Positive reinforcement may function as the mechanism for change with other academic interventions. With performance feedback, students receive information about their work, a consequence that can motivate them to surpass previous accomplishments. Referencing

interspersed task presentation, the procedure seems to operate through conditioned reinforcement because a student's success with "easy" tasks reinforces eventual completion of all required tasks ("easy" and "hard") (Skinner, 2002).

All of the various prompting procedures function by increasing the probability that a student responds correctly during instruction. Modeling, previewing, and verbal and visual cueing implemented as antecedent intervention set the occasion for responses that can be reinforced subsequently. By systematically removing (fading) prompts while maintaining criterion performance, students eventually learn and demonstrate skills without assistance. Error correction, a behavior-contingent procedure, also prompts correct responding, the mechanism of change being the following: (1) more opportunities to respond accurately in relevant stimulus conditions and (2) punishment of incorrect responses causing a student to avoid error correction (Worsdell et al., 2005).

19.6   Basic Competencies of the Clinician

We discussed earlier in the chapter that the default approach to assessing a student referred for academic skills problems was to test the student using standardized norm-referenced cognitive and achievement instruments to determine whether or not the student met the required discrepancy scores for consideration of special education services (see Fagan & Wise, 2000). In recent years, however, school psychologists have begun to adopt the problem-solving model of behavioral consultation due to the legislative influence of the IDEIA (P.L. 108–444), which mandates a response to intervention (RTI) model of service delivery (Gresham, 1991, 2006). Under the RTI model, a student is provided with an empirically supported treatment and is then formatively evaluated over time. If the student fails to respond to the first intervention, the school psychologist then institutes a more intensive treatment. Following a second failure to respond, the school psychologist then implements an individualized intensive treatment for the referred academic skills problem. Failure to respond at this level then indicates that testing the student for special education placement may be warranted.

The core clinical competency most germane to the RTI model and fundamental to best practices of the treatment of academic skills problems – thereby in direct compliance with IDEIA – is the problem-solving model of behavioral consultation. Generally speaking, behavioral consultation is a highly structured approach to problem-solving both academic and behavioral concerns (see Erchul & Martens, 2002; Martens & DiGennaro, 2008). Derived from the problem-solving approach of D'Zurilla and Goldfried (1971), behavioral consultation consists of four tasks (see Bergan, 1977; Bergan & Tombari, 1975): (1) problem identification, (2) problem analysis, (3) plan implementation, and (4) problem evaluation. During steps 1, 2, and 4, the consultant meets with a consultee to discuss a target student using an interview format. Step 3 consists of all treatment procedures used to target the academic problem.

During step 1 (the problem identification interview) of the problem-solving process, the clinician (i.e., the consultant) should meet with the consultee (i.e., the student's parent, teacher, caregiver, etc.) to identify the academic skill(s) being targeted and arrive at an operational definition of the student's performance (see Erchul & Martens, 2002). In addition, during this stage the clinician should obtain estimates from the consultee regarding both the severity of the problem (e.g., how far behind grade level is the target student's academic problem?) and the environmental conditions which appear to occasion the occurrence of the

problem the most (e.g., how does the student respond when contingencies are placed on his/her academic performance?). As the clinician gains an understanding of the nature of the academic problem, he/she should then work with the consultee to devise a plan to collect baseline data.

The problem analysis task (step 2) of the problem-solving task should involve a dialogue between the clinician and consultee about the results of their baseline assessments and a discussion of possible treatment plans based upon their collaborative findings (Erchul & Martens, 2002). With baseline data collected and analyzed, the clinician should work with the consultee to arrive at a reasonable goal for change. Moreover, to rule out possible performance deficits, the clinician should evaluate environmental factors such as the antecedents or consequences to the academic problems being observed through functional assessment methodology (e.g., Martens & Ardoin, 2002; Durand & Crimmins, 1988) developed in accordance with behavior analytic principles (Skinner, 1953). The clinician should work with the consultee to design and implement an academic intervention based on the findings from the problem analysis task as part of the plan implementation (i.e., step 3 of the problem-solving process). The findings of the plan are then reviewed during the problem evaluation interview of the problem-solving process (i.e., step 4) to determine whether or not the goals of the problem analysis interview were met, and whether the plan should continue. If the results of the problem evaluation interview suggest that the plan did not improve the academic problem, the clinician and consultee should return to the problem analysis stage and discuss the possible pitfalls in their previous approach as well as ways to address these issues in the subsequent implementation of a new and improved plan.

Imminent to the problem-solving process of behavioral consultation is the basic competency of the clinician in evaluating whether or not the referred academic problem results from either a skill deficit (i.e., the student lacks the ability to adequately complete the academic demand) or a performance deficit (i.e., the student has the ability to complete the academic demand, but is not motivated to do so). The clinician must be able to identify and accurately implement empirically supported assessments of the referred academic problem, as verbal reports often generated in consultative interviews are typically insufficient to gather data (e.g., Martens & DiGennaro, 2008). Two such empirically supported assessment techniques for academic skills problems – of which clinicians should have a basic competency to conduct – are (1) curriculum-based measurement and (2) functional behavioral assessment.

Curriculum-based measurement. To reiterate earlier discussion, curriculum-based assessment refers to a general model of academic assessment where the clinician assesses the academic environment to examine the degree of instructional match (Eaton & Lovitt, 1972) between the present curriculum and the referred students' current levels of academic ability relative to his/her peers within that curriculum (Deno, 1987; Shapiro, 2004b). Under the umbrella of curriculum-based assessment is the specific assessment technology of curriculum-based *measurement*. As for academic problems, curriculum-based measurement enables the clinician to accurately produce data-based decisions regarding instructional interventions and special education placement (see Shinn, 1989). Specifically, through the use of local norms (Deno, 1985, 1986), the clinician identifies the referred student's instructional level with regard to the instructional hierarchy (Haring et al., 1978), and compares these data to the student's peer group to determine the relative significance of the academic problem. Through analyses of the errors made during the assessment (Howell & Nolet, 1999; Howell, Zucker, & Morehead, 1982), the clinician can begin to isolate the exact problem area of the academic concern

(e.g., errors involving whole words versus letter sequences in reading, or subtraction with regrouping versus subtraction without regrouping in mathematics). Using such data, the clinician can then determine whether the student lacks accuracy or fluency with regard to the academic problem, which would influence the type of academic intervention to be implemented subsequently (Daly & Martens, 1994). Determining that a student lacks basic academic skills (i.e., accuracy) may suggest a skill deficit. In cases where accuracy is high, but fluency in the academic problem remains average or even low may suggest the need for more practice or for some simple motivational systems to be implemented. When a student demonstrates near-grade level performance during the academic assessments but exhibits poor academic skills throughout the school day, the clinician should take further steps to understand the variables surrounding the student's *performance* deficits through the use of functional behavioral assessment technologies.

Functional behavioral assessment. To competently design interventions targeting academic skills problems resulting from performance deficits, clinicians should have a basic understanding of various functional behavioral assessment methodologies. Functional behavioral assessment posits that many behaviors, regardless of topography or form, serve a purpose for the behaving individual (Skinner, 1957). More specifically, researchers (e.g., Iwata, Dorsey, Slifer, Richman, & Bauman, 1982/1994) postulate that people behave (a) to gain access to something (e.g., attention, tangible items such as food/drink or goods/activities, or sensory input), (b) to escape/avoid something (e.g., demands, attention, or setting events), or (c) because of a pre-existing medical condition.

While federal legislation (IDEIA) mandating use of functional assessment in educational settings does not define this assessment technique, researchers and behavior analysts have proposed several procedural models (e.g., Crone & Horner, 2003; Matson & Minshawi, 2007), which clinicians should be competent to use during the academic problem assessment process. Such strategies include, but are not limited to, questionnaires/scales, direct observation procedures, and experimental analyses of behavioral functions. Questionnaires/scales such as the Motivation Assessment Scale (MAS; Durand & Crimmins, 1988), the Functional Analysis Screening Tool (FAST; Iwata, 1995), and the Questions About Behavior Function (QABF; Matson & Vollmer, 1995) may be used to quickly identify hypothesized functions through the verbal report of respondents such as teachers/caregivers. Typically, the respondent is instructed to rate consequences delivered contingent on problem behavior, with each one mapping onto a specified behavior function. With such information gleaned from this indirect approach to functional assessment, the clinician should then analyze these hypotheses in more detail using direct observation procedures.

With respect to direct observation approaches to functional assessment, the clinician should be competent in the collection of antecedent-behavior-consequence chains (ABC analysis) using narrative descriptions, scatterplots, and conditional probabilities. Narrative descriptions typically document events immediately prior (i.e., antecedents) and subsequent (i.e., consequences) to occurrences of the problem behavior (Bijou, Peterson, & Ault, 1968). Scatterplot analyses (Touchette, MacDonald, & Langer, 1985) offer more information to the clinician about behavior function by identifying temporal patterns associated with problem behavior (e.g., does the behavior occur more often during independent seatwork or group instruction in the afternoon?). Perhaps the most accurate means of summarizing direct observations is by calculating conditional probabilities of differing consequence types (i.e., attention, escape, and tangible) given the occurrence of problem behavior (Bakeman &

Gottman, 1986; Martens, DiGennaro, Reed, Szczech, & Rosenthal, 2008; McKerchar & Thompson, 2004; Vollmer, Borrero, Wright, Van Camp, & Lalli, 2001). Given the appropriate behavior, by comparing such a conditional probability to the conditional probability of the same consequence types, the clinician can determine the strength of the contingency (Martens et al., 2008). Using such conditional probabilities, the clinician can gain greater confidence in hypothesizing the function of the target behavior (i.e., stronger contingencies suggest a greater likelihood that the consequence is indeed the maintaining function of the problem behavior).

19.7 Expert Competencies of the Clinician

When clinicians first approach consultees about a referred student's academic skill(s) problems, there has likely been a history of repeated treatment failures for this student. Thus, teachers entering the consultative relationship with the clinician often begin this process with a great deal of frustration and helplessness (Erchul & Martens, 2002). In addition, due to this frustration, these teachers may believe that the academic skills problems are caused by within-student characteristics (Ysseldyke & Marston, 1990). Collectively, such consultee attributes may evoke a situation where the consultee is skeptical of the clinician's ability to successfully assist in addressing the referred student's academic problems.

In an effort to circumvent these issues, Erchul and Martens (2002) advocate the use of an integrated model of consultation, wherein the consultant uses social influence strategies and skill-building supports for the consultee in concert with the problem-solving process (described above) to create a cooperative and productive consultative approach. Research into the causes of academic problems addressed via consultation suggests that 38% of cases are the direct result of the consultees' lack of knowledge (Gutkin, 1981). Thus, clinicians should "empower" consultees to effectively change their instructional techniques. Moreover, due to consultees' lack of awareness of their own limitations and contributions to the academic problems of their students, social influence strategies are necessary to promote changes without loss of cooperation or resentment of the clinician's assistance.

Social influence strategies in consultation stem directly from French and Raven's (1959) identification of social power bases. Particularly, social power represents a means of influence in the modification of one's behaviors or thoughts through the deliberate use of conversational or dialectical techniques. To date, 14 social power bases have been identified (Raven, 1992, 1993), with four of these bases (informational, expert, legitimate dependence, and referent) being empirically supported as effective in school consultation (Erchul, Raven, & Whichard, 2001). Thus, clinicians should be competent in the use of these four social influence strategies to effectively consult with teachers or other change agents relevant to academic skills problems.

The first social power basis for use as an influence strategy in consultative relationships is the informational approach. Within this approach, clinicians present a logical and sound rationale for his/her recommendations to increase the likelihood that the consultee will accept these proposals and comply with the clinician's requests (Raven, 1992, 1993). In practice, clinicians may benefit from presenting the consultee with research articles or other empirical sources documenting the efficacy of the recommended procedures. Likewise, the clinician may also present data from the referred case as evidence supporting the recommendations to the

consultee. Such data may be derived from any relevant curriculum-based or functional behavioral assessments conducted on the target student's academic-related problem behaviors.

The second social influence technique for use in school consultation is the expert social power base. Competent use of the expert power base requires the clinician to present himself/herself to the consultee as an expert in the particular treatment or approach being advocated (Raven, 1992, 1993). For instance, at the onset of the consultative relationship, the clinician should introduce himself/herself to the consultee by using any credentials or certifications that suggest to the consultee that he/she is well qualified to assist with the given case (e.g., "Hello Mr. X, my name is Mrs. Y and I am a nationally certified school psychologist with a Ph.D. in school psychology"). As the consultative relationship progresses through the problem-solving process, the clinician should call upon other expert credentials or experiences to bolster his/her status. For example, as issues arise or treatment approaches are discussed, the clinician should use statements such as "I took a course on that topic during my doctoral training" or "I am familiar with that technique because I attended a workshop conducted by Dr. Z." Clinicians may also point out previous cases that they assisted that were similar to the one being discussed. Through successful use of this power base, the consultee may be more likely to trust the clinician's judgments and perspectives on the case.

Legitimacy of dependence power base is the third social influence approach a clinician should be competent to use in consultation on academic skills problems. In practice, this process translates to the clinician being competent in presenting himself/herself as an essential part of the solution to the academic problem (Raven, 1992, 1993). Clinicians may be successful in this power base by fostering the perspective that he/she has the skills/knowledge to do something that the consultee cannot. For example, the clinician may ask the consultee to collect certain data that only the clinician has the ability to analyze or interpret. As the consultee grows dependent on the clinician, he/she will be more likely to view the clinician as a source of help and assistance, rather than an unwelcome visitor or criticizer.

The final social power base of relevance to consultation on academic skills problems is that of the positive referent (Raven, 1992, 1993). Competent use of the positive referent power base builds a level of rapport between the clinician and the consultee that directly influences the consultee to accept and welcome the clinician's assistance in the case. For instance, the clinician may illustrate that he/she has worked in a setting similar to that of the consultee, that they share similar clinical interests, or that they share similar backgrounds/interests related to education or psychology. The clinician may also benefit from pointing out any appropriate personal similarities that may come up throughout the case, such as seeing something on the consultee's desk (e.g., vacation pictures or magazines) that may spark conversation about unrelated topics, which nonetheless develop meaningful rapport between individuals. As the clinician paints himself/herself as increasingly similar to the consultee, the consultee may become more trusting and accepting of the clinician, and thereby be more likely to view the relationship as favorable. Successful use of this influence strategy may increase the consultee's drive to appeal to the clinician and follow the clinician's recommendations to maintain the relationship.

Functional analysis. While the questionnaires/scales and direct observations of functional assessments described previously are well-documented approaches to describing possible antecedent–behavior–consequence chains in the examination of behavioral functions, only experimental analyses can identify causal relationships between function and behavior (e.g., Iwata et al., 1982/1994; Skinner, 1953). Functional analysis, as an experimental approach to

functional assessment, is typically conducted in an analog format, wherein the clinician purposefully delivers either attention, escape from demands, or access to tangible goods or activities contingent upon the occurrence of the problem behavior in an effort to examine whether the behavior will increase in the context of any of these conditions (see Hanley, Iwata, & McCord, 2003). When the clinician observes an increase in problem behavior during one or more of these conditions, the clinician can then design a function-based intervention. For example, a clinician may observe that a student's calling-out behavior during independent seatwork is maintained by escape from the academic demands. A successful function-based treatment in this situation may be to institute an incentive system whereby 5 min of on-task behavior during independent seatwork earns the student a 5 min break.

Brief experimental analysis. As discussed in the introductory section, the primary goal of the clinician with an academic problem referral is to identify influences on student behavior before formulating intervention. Given this keystone objective in academic interventions, the clinician should be competent in adapting functional analysis to examine both instructional and classroom management techniques. As Daly et al. (1997) propose, the clinician should seek to understand whether the academic problem is a function of: (a) a performance deficit, (b) lack of experience, (c) lack of support, (d) improper instructional tools, or (e) a skill deficit. Using single-case design methodologies in a format similar to the functional analysis approach outlined earlier, the clinician can experimentally pinpoint the root of the academic problem with these various functions in mind.

Specifically, proper translation of functional analysis to academic related behaviors requires an understanding of brief experimental analysis methodology. Clinicians should note that functional analysis is but one technique comprising brief experimental analysis. Generally speaking, brief experimental analysis relies upon short data collection sessions conducted in an alternating treatment format (i.e., randomized sequence of experimental conditions; Martens, Eckert, Bradley, & Ardoin, 1999). Such experimental designs should incorporate reversal to baseline conditions, or repeated demonstrations over time of the intervention conditions in an effort to demonstrate experimental control. In brief experimental analyses of academic interventions, the clinician seeks to find differentiated outcomes associated with environmental conditions controlling behavior – in the same vein as functional analysis of challenging behavior. However, contrary to functional analysis, brief experimental analysis of academic interventions targets conditions that increase accurate responding rather than increase challenging behavior.

When selecting possible instructional techniques for a brief experimental analysis of academic interventions, the clinician should include empirically supported methods which correspond to the various dimensions of academic skills problems described by Daly et al. (1997) and outlined earlier. During such analyses, both antecedent- and consequence-based strategies may be programmed. For instance, in a study on the benefits of brief experimental analysis in selecting interventions targeting reading fluency, Daly, Martens, Hamler, Dool, and Eckert (1999) combined antecedent and reinforcement procedures through sequential applications to identify the most effective "treatment packages" for four students. Antecedent procedures consisted of listening passage preview and repeated readings, while consequence procedures consisted of error correction and reinforcement contingencies for surpassing previous reading scores. For all students, the empirically derived "treatment packages" increased reading fluency relative to baseline measures. A recent meta-analysis on the efficacy of brief experimental analysis such as the one described earlier for reading fluency found a mean effect

size of 2.87 (*SD* = 2.68; Burns & Wagner, 2008) for treatments identified as the most effective from brief experimental analyses over other fluency building techniques across 41 children in 13 studies. Thus, brief experimental analysis of interventions for reading fluency has evidence confirming its status as an empirically supported procedure in the selection of academic interventions.

Programming for generalization and maintenance of treatment gains. The work of the clinician is not complete without thoughtful consideration of how to ensure that the plan decided upon by the consultative process will continue to be carried out in the absence of the consultative relationship. While careful decision-making and skillful use of problem solving and social influence strategies may increase the likelihood that the consultee will accept and implement intervention procedures, the clinician must program the plan to be successful in his/her absence. That the desired behavior change will transfer across people, settings, and responses should be a goal for all intervention plans (Stokes & Baer, 1977). Fortunately, there are several procedures that can promote generalization and maintenance of treatment gains.

Identified by Stokes and Baer (1977), one common but unsuccessful approach to programming the lasting success of an intervention plan is to train a particular skill and "hope" that the skill maintains itself naturally. More successful approaches strategically incorporate generalization-facilitating strategies during intervention. For example, as a student begins to master a particular response set (e.g., addition facts), the teacher should address new response sets or other similar but unmastered sets (e.g., subtraction facts). Using ongoing data collection and formative decision-making, the teacher can monitor the student's progress and introduce the new stimuli upon completion of some predetermined criterion (e.g., introduce new stimuli upon 80% accuracy across three consecutive days).

Another component of a successful generalization/maintenance plan is to use naturally occurring reinforcers for success (Stokes & Baer, 1977). For example, tangible rewards may be highly successful during the initial phases of intervention but may be impractical long-term. However, if the teacher pairs delivery of tangibles with social praise, the tangibles could be faded out over time as long as social praise continues. Moreover, social praise will likely occur naturally from the student's peers, parents, or other teachers, making the effects generalize across settings or persons.

Finally, the clinician should work with the consultee to identify several sets of academic materials similar to the target skills. Like the example of sequential modification, using exemplar sets increases the chances that the student's academic skills will persist in the absence of the formalized training materials. Stokes and Baer (1977) also advocated the usage of stimuli that the student will encounter throughout the day to increase the chances that the skills learned during treatment will easily translate to academic tasks outside of the formalized intervention. Throughout this process, approximations to the correct response should be reinforced to shape appropriate responding and to increase the reinforcing value of the task.

19.8 Transition from Basic Competence to Expert

The transition from basic to expert competence depends on experiences, mentoring, and dedicated efforts that lead to exemplary practice. Graduate school, internship, and postdoctoral training are critical milestones toward career development but by themselves are insufficient in achieving expert competency.

Establishing recognized expertise in the area of academic problems should be planned strategically with several objectives in mind. For example, clinicians should be licensed psychologists in the state(s) in which they practice. An applicant for state licensure must have requisite academic qualifications, complete an internship program, and receive postdoctoral supervision to become "license eligible." Upon passing each state's licensure examination, the clinician can practice as a psychologist.

Beyond psychology licensure, there are other professional credentials that confer expert competency. Like board certification in medicine, the *American Board of Professional Psychology (ABPP)* grants diplomat status in several areas of specialization. Consistent with the orientation and procedures presented in this chapter, the diplomat in Behavioral Psychology from ABPP would be a first-choice option. An ABPP applicant must be a licensed psychologist with a minimum of 5 years post-licensure experience. The application process requires submission of a "work product" detailing clinical skills that if reviewed favorably, culminates in an oral examination by a panel of ABPP-credentialed experts.

Board certification in behavior analysis (BCBA) is another credential for clinicians specializing in academic problems. Like other credentialing agencies, the *Behavior Analyst Certification Board (BACB)* has academic and practice qualifications that must be met before examination eligibility. Applicants to the *BACB* must also document mandatory hours of approved supervision. A licensed psychologist who is board-certified in behavior analysis is recognized as a professional with specialized training and expertise consistent with the competencies outlined in this chapter.

Continuing education (CE) is another consideration in the transition from basic to expert competence. Licensed psychologists must accumulate a specified number of continuing education credits annually to maintain licensure. Similarly, other credentialing agencies such as *ABPP* and *BACB* require completion of continuing education activities yearly and during multiple-year cycles. There are many venues to fulfill continuing education requirements such as conferences, training workshops, topical seminars, and home-study courses. Clinicians with expert competency are diligent in meeting their continuing education obligations by embracing new learning opportunities. For those specializing in academic problems, some relevant continuing education providers include the American Psychological Association (APA), the Association for Behavioral and Cognitive Therapies (ABCT), the Association for Behavior Analysis International (ABAI), and the National Association of School Psychologists (NASP).

Reading the peer-reviewed literature is essential to be on the "cutting edge" of evidence-based and empirically supported practices. Research dissemination through publication informs professional conduct and practice standards. In fact, we propose that expert competency of a clinical psychologist can be judged by his/her knowledge of the contemporary literature. Experts must be able to cite seminal studies, acknowledge salient topics within the professional community, recognize future directions among disciplines, and translate research to practice. The number of books and journals available to clinicians can be overwhelming, so it is worthwhile to focus attention on those most relevant to day-to-day practices.

Another activity in the expert competency trajectory is speaking to other professionals and writing for publication. Local, regional, and national conferences give a clinician many presentation formats, for example, symposia, workshops, roundtable discussions, or poster sessions. By speaking to a large audience of colleagues, one's expository skills are honed, knowledge is put to the test, and reputations are forged. Writing for publication has the same benefits and

importantly, is one of the best ways to gain "free advice" from peers who are recognized experts. As a clinician builds a curriculum vitae (CV) with multiple publications, there is increased awareness of his/her expert competency over professionals who don't publish.

When a clinical psychologist prepares for and achieves licensure and related credentials, participates in continuing education activities, reads the peer-reviewed literature, presents to colleagues, and writes for publication, he/she receives supervision from and interacts meaningfully with a large professional community. Regular support, direction, and advice from experienced peers should be ongoing throughout a psychologist's career. We propose that achieving the highest level of competence depends on routine collaboration with individuals who are knowledgeable, offer constructive criticism, and serve as admirable role models. Many psychologists pursue enduring collaborative relationships through formal "peer supervision" groups, networking, and involvement with state and national professional associations.

19.9 Summary

A large number of school children have academic problems. Poor academic achievement and performance have negative consequences for students in school and as adults later in life. Both categorical and dimensional models are used to quantify academic underachievement. Consistent with a dimensional model, assessing academic performance through direct observation and curriculum-based measurement has the advantage of focusing on teacher-to-student instructional interactions. Effective assessment then leads to informed decisions about the objectives, type, and intensity of academic intervention. Acquisition, fluency, generalization, and adaptation are four stages along a continuum of student learning objectives. There are numerous evidence-based intervention procedures targeting these objectives, including interspersal training, modeling, previewing, prompting, positive reinforcement, and error correction. Clinical psychologists specializing in academic problems should have basic competencies in consultative problem-solving, curriculum-based measurement, and functional behavioral assessment. Some expert competencies for the clinician are understanding social influence strategies in the process of consultation, functional analysis, brief experimental analysis, and methods for programming generalization and maintenance of intervention produced behavior change. The transition from basic to expert competence entails proper credentialing, continuing education, familiarization with peer-reviewed literature, dissemination activities through public speaking and publication, and ongoing supervision and collaboration with senior colleagues.

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20 Role of the Environment in Prevention and Remediation

Sandra Twardosz · Vey M. Nordquist

Abstract: The environment, broadly defined, has long concerned clinicians who work with children and families because it impacts prevention and intervention with problems and disorders. In this chapter, we specifically define "environment" as the organization of the individual's immediate setting in terms of space, time, materials, activities, and people, variables that have received scant attention in the child clinical literature. Operant behavioral and ecological developmental perspectives are presented to describe the processes by which these variables can affect behavior and development, and their relationship to the more distal surroundings of community and culture. Next, we present illustrative research from behavior modification and related literatures which demonstrates that architectural features, spatial divisions, and furnishings; objects, materials, and activities; routines and schedules; and the presence, characteristics, and location of people, affect engagement and modify a wide range of behavior in community settings and homes. Professional psychologists should appreciate the role of the immediate environment in shaping behavior, alone and in conjunction with contingency management and other therapies. They should recognize when a setting must be modified because it is promoting problem behavior or hindering the therapeutic process, and be able to implement changes in the organization of space, time, materials, activities, and people. Changes in the setting may also be effective components of individualized treatment programs, and may be essential for the generalization of treatment effects. Although modifications to the environment cannot usually substitute for contingency management or other therapeutic strategies, they are essential adjuncts and supports to the clinical process, and can contribute to the prevention of dysfunctional and problem behavior.

20.1   Overview

Behavioral, cognitive-behavioral, operant, and other learning-based therapies are used to address a wide range of childhood problems and disorders including anxiety, depression, conduct disorder, social skill deficits, school refusal, enuresis, sleep disorders, tics, learning disabilities, and developmental disabilities. In most cases, family members are an essential aspect of the treatment program, or the main focus of treatment as in child abuse and neglect. Teachers and staff who interact with the child in community settings may also participate and, in some cases, are the primary means by which treatment is delivered.

The therapeutic process typically involves a planned sequence of interactions and a progression of treatment steps directed toward modifying behavior, feelings, and cognitions to ameliorate the presenting problem and to achieve more optimal functioning in everyday life (e.g., Kazdin & Weisz, 2003). Treatment follows the assessment and case conceptualization, and is corrected based on the measurement of progress (e.g., Freeman & Miller, 2002). It can involve didactic instruction, homework, video presentations, and simulations, as well as verbal

communication with the therapist and is frequently based in a clinic or office. Therapists also work directly with clients in homes, classrooms, and childcare programs, and in settings deliberately designed to be therapeutic, such as preschool early intervention classrooms and residential treatment centers. Contingency management, gradual exposure to feared stimuli, and the systematic teaching of adaptive behavior are common types of intervention. There has been an increasing focus on developmental and cultural issues, as they pertain to the intervention process (e.g., Barry & Pickard, 2008; Holmbeck, Greenley, & Franks, 2003; Knight & Ridgeway, 2008), and on the need for adjunctive therapy to address the parental depression, extreme stress, and marital conflict that can accompany childhood disorders (e.g., Chronis, Chacko, Fabiano, Wymbs, & Pelham, 2004; Griest et al., 1982).

There is also frequent discussion on the influence of the environment on the development of disorders, the possibility of prevention, difficulties in accessing treatment services, and the likelihood of adherence to treatment (e.g., Ammerman & Hersen, 1997). In these discussions, the word "environment" has multiple meanings and uses. For example, the environment can include anything that interacts with heredity in the etiology of disorders. A wide range of community and societal variables including economic conditions, violence and crime, educational opportunities, the willingness of insurance companies to pay for mental health services, and the availability of drugs also constitute the environment. "Environment" can refer to the countless variables that interact with one another in a home or similar setting including cultural practices, domestic violence, parental psychopathology, household chaos, social networks, family relationships, single parenting, and a host of other factors. The home environment of a child can be described as altered by the participation in therapy and the implementation of a treatment plan. Finally, the "natural environment" is contrasted with the laboratory or clinic as a location for research or service delivery (e.g., Stichter, Clarke, & Dunlap, 2004; Wilson, Mott, & Batman, 2004). Given these and numerous other uses of the term, it is mandatory for us to define what we mean by the environment.

We use the term "environment" to refer to the organization of an individual's immediate setting in terms of space, time, materials, activities, and people. Specific variables include architectural features, spatial divisions, and furnishings; objects, materials, and activities; routines and schedules, and the presence, characteristics, and location of people in the setting. The way in which these variables function forms part of the context for people's behavior and interactions, including those involved in therapy. In many cases, they can be modified to encourage or discourage particular types of behavior or to support therapeutic programs.

With some exceptions, the organization of the immediate setting in which treatment occurs or to which the effects of treatment must generalize has received scant attention in the child clinical literature. There is usually little reference to how the organization of a home, classroom, or residential treatment center might support or hinder therapy. It is even rarer for changes in the organization of a setting, such as its routines, materials, or activities, to be a major part of the intervention, or for settings to be designed deliberately to foster appropriate engagement and prevent problem behavior. This is unfortunate because these variables are continually operating in settings where prevention and treatment occur regardless of whether they are made explicit. Almost any therapy will be adversely affected, for example, by the lack of time management skills and family routines that lead to missed clinic appointments and the inability to carry out the treatment tasks. More specifically, a contingency management intervention designed to decrease aggression among children will probably be supported by a setting in which toys and games that prompt violence have been replaced by those that foster cooperation.

A recent descriptive analysis of the content of selected parent training programs illustrates the lack of attention paid to such variables. Prinz and Jones (2003) described the characteristics of ten family-based treatment approaches for preschool and elementary school children's conduct problems that involved a Parent Management Training Approach delivered either individually or to a group of families. These programs were described in terms of their operational facets (e.g., feedback and coaching, home observation, and modeling), and their content pertaining to increasing positive behavior, managing misbehavior, and building family relations. Of the more than 50 types of content that were found in these ten programs, only two pertained to family organization or context rather than to ways of interacting with, teaching, or disciplining, a child. One of these was "maintaining a predictable routine," which was part of the content of Reciprocal Skills Training (Barrett, Turner, Rombouts, & Duffy, 2000). The other was "providing engaging activities and environment for child," which was part of the Triple P-Positive Parenting Program (Sanders, Markie-Dadds, & Turner, 2001). The inclusion of such information in addition to that on teaching and discipline may be a critical feature for parents in the program who do not have predictable family routines or who do not realize the contribution that activities and play materials can make to the encouragement of appropriate behavior. Including this type of knowledge could contribute to the maintenance of treatment gains and the prevention of future problems.

Research on the power of the environment to influence behavior points to four major reasons for clinicians and others involved with treatment and prevention to be cognizant of the impact that the organization of the immediate setting can have on the therapeutic process. First, aspects of the setting may make it difficult or even impossible for treatment procedures to be implemented consistently, or they may be particularly supportive of such procedures. The absence of predictable routines, for example, means that therapy cannot be integrated into them. On the other hand, the presence of a spouse or a relative may make it easier for one parent to focus on therapeutic tasks because someone is available to supervise other children. Second, some aspects of the setting may support the inappropriate or dysfunctional behavior, feelings, or cognitions that are the focus of therapy. A program to address school refusal, for example, may be hampered by a curriculum that is inappropriate for the student and school policies that do not adequately address the issue of bullying. Third, organizational features of the setting can support or hinder maintenance and generalization. An office-based program to teach social skills to an elementary school student requires everyday settings where it is useful to display those skills and where they can be practiced; there may be few opportunities to do so if recess has been eliminated, socialization at lunch prohibited, and where a lack of sidewalks and playgrounds makes it difficult for children to play together after school. Fourth, the need for therapy directed at individual children may, in some cases, be avoided if settings are organized to support engagement and discourage disruption and aggression. A childcare program that subjects children to long periods of waiting makes it likely that some of the children might use the time for aggression, which may become so serious that they are referred for individual therapy. Modifying the schedule may help to eliminate some of the situations in which aggression is most likely to occur.

Although the organization of space, time, materials, activities, and people in the immediate setting does not receive sufficient emphasis, these variables are sometimes mentioned in descriptions of therapeutic procedures or circumstances that give rise to child problems. For example, Harrington (2005) notes that having little to do makes most psychiatric conditions worse. Thus, an hour-by-hour schedule of daily activities is part of the treatment for youth

depression. Comprehensive behavior management programs for attention deficit disorder include an emphasis on organization at home, such as having an area for homework and keeping materials in order (Rapport, Kofler, Alderson, & Raiker, 2008). Green (2005) considered the organizational features of child and adolescent inpatient psychiatry units that seemed to be appropriate for the use of cognitive behavior therapy. He described the therapeutic opportunities provided by these settings including intensive supervision when necessary, structuring of the day around school, meal, leisure, and therapeutic activities and the social therapy that can occur in the context of the routines of daily living.

In the remainder of this chapter, we will highlight the role of the environment, defined as the organization of the immediate setting, for prevention and intervention with childhood problems and disorders. First, we will discuss operant behavioral and ecological developmental perspectives on the way in which variables pertaining to the organization of space, time, materials, activities and people are conceptualized and the processes by which they can affect behavior and development. Second, we will discuss illustrative research from behavior modification and related literatures which demonstrate that these organizational variables can affect behavior. Third, we will suggest ways in which clinicians can integrate this knowledge into therapeutic work with children and families.

20.2   An Operant Behavioral Perspective on the Environment

Although operant approaches to behavior modification have emphasized consequences, especially those mediated by people, as a powerful means of controlling behavior and remediating childhood problems, it has long been recognized that complex antecedents to behavior are also highly influential. These antecedent conditions are referred to as setting events (e.g., Bijou & Baer, 1961, 1978; Kantor, 1959; Twardosz, 1985; Wahler & Fox, 1981) and are of two general types. One type consists of the individual's immediate surrounding circumstances, such as the presence of particular objects or people that influence stimulus–response relationships, i.e., facilitate or inhibit the occurrence of behavior that is already in an individual's repertoire. For example, some types of games "set the occasion" for cooperative play; other types make aggression more likely (e.g., Bay-Hinitz, Peterson, & Quilitch, 1994). The immediate surroundings of a shopping mall encourage wandering and exploration, but the presence of several televisions in a home could make sedentary behavior more likely.

A second type of setting event occurs separately in space and time from the behavior it influences and includes the individual's response to the event. The biological state of an individual, produced by food or sleep deprivation, illness, or drugs (e.g., Carr, Reeve, & Magito-McLaughlin, 1996) can function as a setting event because it changes the way in which the individual responds to a current situation. Teaching parents to be alert, that is, fully focused on the present moment, can be viewed as influencing the neuropsychological state with which an individual copes with child behavior, perhaps leading to the use of more effective interaction strategies (e.g., Singh et al., 2007). Another example of this type of setting event is the influence that events at home on a "bad morning" can have on the likelihood that a child might refuse to follow the teacher's instructions or get into arguments with peers at school.

Wahler and his colleagues (Wahler, 1980; Wahler & Graves, 1983) viewed the operation of social networks as setting events. On days when mothers of oppositional children had pleasant interactions with friends, they interacted with their children less negatively than on days when

such pleasant interactions did not occur. Similarly, coercive interactions that low-income mothers in parent training had with relatives and helping agencies increased their likelihood of becoming involved in coercive interactions with their children on those days and would disable the correct implementation of contingency management procedures. Another example is a schedule in which active play precedes an event that requires focused attention, thereby making it more likely that young children will be inattentive (Krantz & Risley, 1977). Clearly, variables pertaining to the organization of space, time, materials, activities, and people, which are the focus of this chapter, can function as setting events; however, other variables, such as illness or upsetting interactions can function this way as well.

As functional behavioral assessment and intervention with the challenging behavior of individuals with severe developmental disabilities started dominating mainstream applied behavior analysis, the term "establishing operations" was introduced to refer to the way in which some antecedent events function to alter the reinforcing or punishing effectiveness of other events and the frequency of the behavior relevant to those consequences (e.g., Laraway, Snycerski, Michael, & Poling, 2003; McGill, 1999). This term appears to overlap with "setting events" to some extent. Research on establishing operations has typically been conducted in highly controlled situations and focuses on well-established problem behavior. The types of organizational variables that are the focus of this chapter are only occasionally manipulated in such studies within the natural environment of the participants. Those studies are included in our literature review.

A perusal of the behavioral literature indicates that currently there is widespread disagreement about the terminology, with the terms antecedents, setting events, and establishing operations sometimes being used interchangeably and sometimes distinguished from one another (e.g., Kazdin, 2005; Luiselli & Cameron, 1998; Repp & Horner, 1999). We will use the term "setting events", because it has been associated with behavioral research conducted in a wide range of natural settings, with a great diversity of problems and participants, both typically developing and developmentally disabled, and with research on the effects of complex organizational variables on behavior.

20.3 A Developmental Perspective on the Environment

Bronfenbrenner's (1979) ecological model of human development incorporates not only variables operating in the immediate settings of an individual, but also the influences of the larger community, society, and culture on what occurs in those immediate settings (e.g., Anderson & Mohr, 2003; Bradley & Whiteside-Mansell, 1997). Knight and Ridgeway (2008) described the world of the child and family who are in therapy using this model. The child's psychopathology exists within the family microsystem, where it affects and is affected by events and relationships within that system. The microsystem exists within larger circles of influence comprising interactions among microsystems, such as communication or conflict between home and school, and organizations outside the family, such as workplaces with schedules and sources of stress that impinge upon family time and activities. The values of the society and culture that may be similar to, or different than, the ones held by family members form the outer circle of influence. The authors encourage clinicians to use this model as a rubric when conceptualizing the presenting problem and intervention; they view their clinical work as a process of creating a new microsystem for the child in which change can occur.

However, a later and more elaborated version of Bronfenbrenner's model (Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 1998; Ceci & Hembrooke, 1995) is more relevant for our understanding of the influence of the organizational variables in the immediate setting. It focuses more precisely on what occurs within microsystems, which are defined as patterns of activity, social roles, and interpersonal relationships in settings made up of physical, social, and symbolic features that invite or inhibit engagement. Homes, childcare centers, classrooms, residential treatment centers, and other community settings are classified as microsystems. These, in turn, are nested within more distal systems. "Proximal processes", frequent, stable, reciprocal, and progressively more complex patterns of interaction between an individual and the persons, objects, and symbols that surround them occur within microsystems, and are the means by which development occurs, changing genotypes into phenotypes. Adult–child interaction, playing with objects and peers, acquiring new skills, and caring for others are examples of proximal processes. The number and level of proximal processes in an individual's microsystems help to determine, in conjunction with the characteristics of the developing person, individual competence or dysfunction.

Proximal processes occur within and draw upon the physical, social, and symbolic resources provided by the immediate environment of the microsystem, including whether or not the physical environment invites exploration and is responsive to behavior and whether or not there is temporal regularity or unpredictability of activities. The microsystem must also import resources, such as knowledge, from the more distal surroundings of the neighborhood and larger society. The presence, absence, and use of resources either supports or hinders proximal processes and is part of what is meant by saying that an individual's environment is enriched, well organized, and advantaged or impoverished, chaotic, and disadvantaged. A study by Evans, Maxwell, and Hart (1999) illustrates the interplay between a proximal process and the resources of a setting. They found that parents in more crowded homes speak in less complex and diverse ways to their children and are generally less responsive to them than parents in less crowded homes; this effect was unrelated to socioeconomic status or number of children in the family. They proposed that people cope with the unwanted social interaction that accompanies crowding by withdrawing from one another. Too many people in a confined space may be a hindrance for some of the proximal processes involved in language acquisition.

The distinction that Bronfenbrenner and his colleagues draw between proximal processes and the resources of the surroundings is very helpful. Environment is not simply defined as everything that exists or is experienced within a setting, but has a more precise meaning. Organizational features are ways in which the physical and social resources of a setting are arranged to support or hinder individuals' interactions with people, objects, and symbols (Roskos & Twardosz, 2004). The prevention of childhood problems can be viewed as resulting partially from settings in which these resources support the proximal processes that lead to competence. The consistent implementation of an intervention may be viewed as a proximal process which is surrounded by the way in which space, time, materials, activities, and people are organized and operate in the immediate setting. Some of these resources support the intervention and others do not. Knight and Ridgeway (2008) point out that people in a child's life can be a resource, because more are available to help with the therapeutic process. However, people can be a hindrance as well if they disagree about the usefulness of therapy.

Both operant behavior modification and developmental ecological perspectives contribute to our understanding of the effects of organizational variables on the individual. As setting events, they are linked to the operation of consequences, to other setting events, and to other

antecedent events, such as prompts, that also act to make behavior more or less likely to occur. It connects them to a change-oriented point of view, that is, these variables can and should be changed to benefit children and their families. On the other hand, the bioecological framework connects the genetic makeup of the individual with the surroundings that contribute to gene expression. It focuses attention on the importance of fostering the development of the individual as well as responding to the occurrence of specific problems and disorders. The distinction between proximal processes and the resources that support or hinder them helps bring organizational variables into sharper focus. Both of these perspectives emphasize the critical importance of an individual's engagement with the surroundings; engagement brings the individual into contact with consequences and is one of the means by which development occurs.

20.4 Basic Competencies

All professional psychologists should be knowledgeable about how the environment shapes behavior and how manipulations of the physical and social aspects of the immediate setting can be used to achieve desired changes in a client's behavior, social and family relationships, success in school and other settings, and mental health. They should have skills commensurate with this knowledge and be able to implement such environmental changes. In working with children and families, the basic competencies include: appreciating the relationship between productive engagement and the prevention of problem behavior, and using the environment to increase engagement; recognizing how architectural features, spatial division, and furnishings can influence the shaping of behavior; using materials and planned activities to achieve goals; modifying the organization of time through new routines and scheduling to achieve change; using the presence, characteristics, and location of people to naturally modify behavior; and recognizing that the setting is a system with all the implications for planned and unplanned changes that are involved. This section describes theory, research, and examples of effective practice for each of these competency areas.

20.4.1 Organization of Settings for Prevention and Remediation

Engagement. The productive engagement of people with their surroundings is fundamental to development, learning, and the prevention of problems that may ultimately require intervention (Bronfenbrenner & Ceci, 1994; McWilliam, Trivette, & Dunst, 1985; Risley, 1977, 1996). Individual characteristics, nature of the relationships people have with one another, culture, neighborhood safety, developmental level, and a host of other variables contribute to the amount and type of engagement that occur. The organization of space, time, materials, activities, routines, and people in the immediate setting interact with all of those factors to contribute to engagement, because they operate continuously as setting events, making the occurrence of some types of behavior more likely than others.

Homes, classrooms, and residential facilities where productive engagement is high are likely to be those where angry, disruptive, and aggressive behaviors are infrequent. In those settings, there are no long periods of waiting with nothing to do; children are supervised; there are some planned activities and routines with clear goals; space and materials are organized to support them; there is a predictable schedule; and adults' relationships with one another are

positive and supportive. Adults in these settings are working hard but they are not overwhelmed because characteristics of the setting, such as the right equipment, support them. These are settings that are most likely to support intervention for a specific child problem, disability, or skill deficit because parents, teachers, and staff have the time and energy to implement therapeutic procedures consistently and the organization of the setting does not work against the goals of treatment. Moreover, since people are productively engaged most of the time, there is less need to use procedures to decrease behavior, and when such procedures are necessary, they can be gentle rather than severe (Risley & Twardosz, 1976; Twardosz, 1984).

Lack of productive engagement takes many forms. At home, children may spend hours watching anything that is on television, engage in fights with siblings, and annoy parents with minor complaints and major tantrums. At school, children may have little to do for significant periods of the day, as they transition from room to room and wait for teachers to complete administrative duties or cope with children with challenging behavior. Asking about engagement implies that the operation of setting may be the problem rather than, or in addition to, the individual who has been referred for treatment and that some of the organizational features of the setting may need to be altered. In general, if many children are not productively engaged or are involved in dysfunctional behavior, the setting is viewed as problematic. Not only might the development and learning of everyone in the setting be at risk, but also it would be extremely difficult to make progress with the clinical problem of an individual in that situation.

There are many specific ways in which settings can be organized to promote engagement and discourage dysfunctional behavior. Family or program composition, cultural and socioeconomic circumstances, resources and dangers in the environment outside of the immediate setting, and so forth, will help determine how this occurs. People are also remarkably good at adjusting their behavior to the characteristics of even the most inconvenient settings to meet the challenges of supervising, caring for, and educating children, often at great cost to themselves. However, although there is not just one "right" way to do things, research conducted in natural settings, using primarily single-case experimental designs and direct observation of behavior, does indicate that specific arrangements of organizational variables can promote engagement, discourage dysfunctional behavior, and facilitate adults' activities and interactions with children. This research can provide clues about why a setting might be functioning well or badly and how the everyday operation of that setting could be altered for the benefit of all the members.

However, no matter how well-organized homes and community-based settings are in terms of promoting productive engagement and preventing problem behavior, individualized therapeutic programs will still be required. These programs rely primarily on the behavior of other people who must, for example, change the way they give instructions, grant or deprive children of privileges, ignore certain types of behavior, assist children in coping with anxiety-provoking situations, and teach specific skills. Modification of aspects of the immediate setting, such as materials and activities, schedules, the structure of routines, and the types of people in the setting can form part of these interventions, perhaps substituting for some of the personal effort.

The illustrative research described here contains examples of both of these uses of organizational variables, that is, to increase engagement and prevent dysfunctional behavior and to address the problems of individual children. The research was conducted in group care settings, classrooms, and homes, and involved typically developing children including children with disabilities, as well as their parents, caregivers, and teachers. Reversal and multiple baseline experimental designs and the direct observation of behavior were the primary methods

used in these studies. Definitions of engagement varied across studies, sometimes including a broad range of behavior appropriate to an activity or time of day, and sometimes focusing more specifically on behaviors such as cooperation with peers, language use, or compliance. (Common measures of engagement can be found in Nordquist & Twardosz, 1992.)

Architectural features, spatial division, and furnishings. The architectural features of existing settings cannot be easily modified; people typically adapt to them but can also become more aware of how they may impact their activities. A limited number of architectural features have been examined in the behavioral literatures for their effect on ease of supervision and engagement. For example, how open (not divided by many permanent walls) or closed a space is can make supervision easy or more difficult. Twardosz, Cataldo, and Risley (1974) conducted experimental studies using movable partitions in infant and toddler day care classrooms. They found that open space did not interfere with children's sleep or participation in preacademic activities, but it did make it easier for staff to see children or to bring them into view in just a few steps. It also made it easier for the supervisor to see the staff. However, these classrooms were divided into areas by low barriers and furnishings. Not only can this practice increase engagement, but it can also provide a degree of privacy and seclusion in group care settings.

Spatial definition, the degree to which parts of a setting are differentiated from one another and contain the resources necessary for the intended activity was found by Moore (1986) to be associated with more exploration, immersion in activities without interruption, cooperation among children in preschool classrooms, and teacher encouragement rather than attempts to control. The division of space into areas furnished to set the occasion for particular types of play is the most common and effective way to design group care settings for young children. It is also currently used as a means of encouraging independent or group work in elementary school classrooms. Weinstein (1977) addressed problems in the way second and third grade students were using a classroom that was divided into subject areas. Design changes were made to areas that were infrequently used or that were used for unintended purposes, such as roughhousing in the reading and writing area. They included the addition of shelving, chairs and tables so that materials could be used more easily, and the addition of a cardboard house that provided some private space. No changes or additions were made to materials or equipment. Results indicated that children were dispersed more evenly across areas after the changes, they engaged in a greater range of appropriate behavior, and girls used the science and games area more frequently. However, the author noted that design changes did not necessarily counter children's strong preferences or dislikes for certain activities.

Consideration of the ways in which architectural features can support engagement, supervision, and privacy extend to community-based treatment settings and to homes. For example, semi-private rooms arranged along a corridor in residence and day treatment programs provide more privacy for clients. Unfortunately, they also make it easier for assaults, self-injury, tantrums, and other dysfunctional behavior to occur without staff knowledge, whereas openward conditions facilitate more immediate delivery of consequences or other forms of therapy (Clark, Ichinose, & Naiman, 1990).

In homes, parents must continually adjust their supervision and children's access to privacy as their children develop; the effort required to do this varies depending on how homes are constructed. Given the number of permanent walls in many homes, supervision of activities such as the use of computer, television, and video games may be facilitated by locating them in the more public, open spaces of a home. Spatial division in homes, with areas set aside deliberately for activities that require extra support, such as doing homework, may encourage

engagement in these activities. An oft-repeated recommendation for encouraging children to read for pleasure at home is to provide a sheltered space with books nearby that is quiet and comfortable (e.g., Morrow & Temlock-Field, 2004).

Materials and planned activities. The judicious use of materials and activities is probably one of the most effective ways of insuring that a setting promotes engagement and discourages disruption, aggression, and other dysfunctional behavior. Studies indicate that simply providing specific types of materials can set the occasion for social rather than isolated play in an after-school recreation program (Quilitch & Risley, 1973) and in an integrated summer program for prekindergarten children (Martin, Brady, & Williams, 1991); for attention and play rather than self-stimulation and handling of medical equipment on a pediatric intensive care unit (Cataldo, Bessman, Parker, Pearson, & Rogers, 1979), and for the incorporation of literacy themes into children's play (Neuman & Roskos, 1992).

Books can also be useful for keeping students productively engaged when teachers are working with other students or engaged in administrative tasks. This was the practice in a middle school religion class; nevertheless, the disruptive behavior of a 12-year-old boy who had been diagnosed with AD/HD and oppositional defiant disorder (ODD) persisted until a book without pictures was replaced with religious comics or books with pictures. Disruptive behavior decreased – an effect that was enhanced by moving him away from preferred peers. It should be noted that this classroom was part of a residential facility, in which a token economy and other behavioral programming operated (Hoff, Ervin, & Friman, 2005).

McGee and Daly (1999) evaluated arrangements of play materials within a therapeutic preschool program serving both children with autism and typical children. The explicit philosophy of this program was to encourage engagement and discourage dysfunctional behavior through setting organization; individual treatment occurred in this context. The most effective condition for promoting engagement and decreasing negative behavior during freeplay was twice weekly toy rotations and inclusion of hobby boxes that contained materials preferred by individual children. Teacher behavior remained consistent throughout all the conditions of the study, lending more credibility to the conclusion that it was the materials and not differences in teacher attention that were responsible for the behavior changes.

Determining which materials are preferred through direct observation or designing toys specifically for individuals with developmental disabilities who may have difficulty becoming productively engaged has a long history (e.g., Favell & Cannon, 1977; Murphy, Carr, & Callias, 1986; Reid, DeCarlo, Schepis, Hawkins, & Stricklin, 2003). The purpose of this approach is to promote engagement and discourage dysfunctional behavior by enhancing the everyday environment with preferred materials. The following studies extend this idea to games and to the combined use of organizational variables and contingency management.

Murphy, Hutchinson, and Bailey (1983) addressed the problem of aggression on an elementary school playground where more than 300 children congregated in the morning by experimentally evaluating the provision of organized games (races and jump rope). The number of aggressive incidents dropped drastically as soon as the games were introduced. Although a time-out procedure was implemented along with the games, it was seldom used despite the fact that several hundred instances of aggression occurred daily during baseline. Similar results with preschool children's aggression and cooperation were obtained by providing competitive versus cooperative games (Bay-Hinitz et al., 1994).

Teaching parents to use planned activities in conjunction with contingency management was investigated in a group of studies with parents whose preschool-aged children were difficult

to manage. Sanders and Dadds (1982) focused on the problems parents had using contingency management procedures outside of the home, when shopping or waiting in doctors' offices, or when they were occupied at home, such as talking on the telephone, and there was little for children to do. They trained parents first to anticipate that problems might arise in certain situations and then to arrange the situation to minimize their occurrence by briefly discussing rules in advance, and providing activities for children in those settings (games that could be played in the car, finding items on a shopping list). The addition of Planned Activities Training (PAT) to a package of contingency management procedures (CMT) resulted in improvements above and beyond what was found with CMT alone.

PAT has been evaluated in combination with CMT (Sanders & Christensen, 1985; Sanders & Plant, 1989) and alone (Huynen, Lutzker, Bigelow, Touchette, & Campbell, 1996). In the latter study, mothers of children with developmental disabilities who had sought help for their children's disruptive and noncompliant behaviors were taught a variety of planning, interaction, and teaching strategies for problems that occurred at specific times of the day and in the community. Praise and mild consequences for inappropriate behavior were included in this version of PAT, but the majority of the training involved preventing the problems through arranging setting events. The skill of designing planned activities for situations that are likely to set the occasion for children's undesirable behavior is also included in Project SafeCare, an in-home ecobehavioral approach for treating and preventing child neglect and abuse (e.g., Gershator-Molko, Lutzker, & Wesch, 2002).

The provision of materials and planned activities not only helps to prevent problems but also assists children's learning, because both the materials and peers provide feedback that may lead to increased skill development. Specific arrangements of materials also form an essential part of the context of highly developed teaching strategies to assist children with language difficulties (e.g., Hancock & Kaiser, 2006). However, simply providing materials is often not sufficient to increase engagement; some children with disabilities will require individualized instruction and reinforcement to promote even the simplest types of materials' use. Any child, however, will need adult guidance, teaching, and encouragement with materials that they cannot use productively alone. The presence of such materials in homes can provide opportunities for parent–child interaction.

Organization of time through routines and scheduling. The way in which routines are structured, predictability of scheduling, precedence of certain activities over others, and the way people share responsibility for managing routines in home and community settings can function as complex setting events for engagement and inappropriate behavior. Two studies illustrate the way in which replacing cafeteria-style with family-style dining can set the occasion for particular types of engagement. Doke, Feaster, and Predmore (1977) evaluated family-style dining with youths at a psychiatric treatment facility who obtained their trays, ate, and then left the dining room to smoke and socialize in a poorly supervised area. When family-style dining, which included table-setting and cleanup tasks, serving one's food from bowls, music, and rules for appropriate behavior, was implemented, the youths remained in the dining room and participated longer compared with conditions of cafeteria-style dining and youths who did not eat in family-style. This effect was replicated in a residential facility for developmentally disabled boys, where family-style dining simply involved helping oneself to portions from serving bowls rather than obtaining food on a tray (VanBiervliet, Spangler, & Marshall, 1981). Staff did not sit at the tables with the boys or serve the food but simply supervised residents in the entire dining room. Not only did the boys remain at the table longer, but they also talked more to one

another and their comments went beyond asking for food. If the boys had been involved in structured programs to encourage more elaborate language, this situation would have provided the opportunity for generalization of those skills.

There are few existing studies in which scheduling was viewed as an independent variable, systematically changed, and the effects on engagement observed. Much like architectural features, the schedule that operates in group care settings or homes may be viewed as something unchangeable to which people must adjust their behavior. The following examples indicate that this need not be the case. Several studies conducted in compensatory preschool classrooms demonstrated that a schedule comprising concurrent activities, where children could leave an activity when they were finished and become involved in another activity, was superior in promoting engagement compared with sequential schedules where all children were required to finish an activity before any of them could move to the next one (Doke & Risley, 1972; LeLaurin & Risley, 1972). It is easy to imagine what could occur during the lengthy periods of waiting that often accompany sequential scheduling. In these kinds of situations, children have little to do except whine, bicker, and perhaps become aggressive. When periods of waiting are repeated day after day, children who are more likely to respond with negative behavior will have ample opportunity to engage in it. Under these circumstances, any type of adult attention that follows negative behavior may function as a reinforcer. Concurrent schedules require that teachers divide the responsibilities by supervising the different areas in which activities occur, rather than accompanying specific groups of children as they move from area to area. This is the division of responsibilities that often occurs in families when one adult assists a child with homework and another cleans the kitchen, answers the phone, and supervises another child in doing a chore.

Another aspect of the organization of time is the predictability of schedules. This dimension was investigated by Frederiksen and Fredericksen (1977) in a classroom for developmentally delayed adolescents. Activities in the classroom occurred in a fixed sequence and then in random order; the teacher was instructed to apply the same consequences for appropriate and inappropriate behavior throughout the study. Random schedules resulted in more disruptions and less task completion. Effects were more serious for students who had performed most poorly during the predictable schedule. However, there was some indication that students were responding more favorably to the unpredictability by the end of the study.

Krantz and Risley (1977) compared the alteration of a setting event to contingency management for their effects on kindergarten children's attention during story periods. When an active period of dancing, musical chairs, or outdoor play preceded book reading children took a longer time to transition to the activity, displayed a lower amount of attention, and engaged in a much greater number of disruptions. These problems were remediated using contingent praise and privileges, but they were prevented by preceding storytime with a brief heads down period. In this situation, a mild problem was addressed just as effectively by modifying a setting event as by using consequences.

Sometimes changes in a personal schedule or routine can be effective in the remediation of individuals' severe challenging behavior that does not appear to be related to opportunities for engagement in the immediate setting. Functional assessment was used to investigate the problem behavior of two students with severe disabilities who were attending a special education class at a high school (Kennedy & Itkonen, 1993). It was determined that when one of the students overslept a series of events occurred, including needing help to get dressed, that

culminated in aggression toward herself and other students during the school day. For another student, problem behaviors seemed to be provoked by the particular route taken by the aide who drove her to school. Insuring that the former student woke up on time so that her morning routine went smoothly and that the aide took the highway rather than the city route all but eliminated the problem behaviors in both students.

Routines and schedules obviously provide some of the basic structure for family life and can serve as the context for the implementation of treatment procedures. This point will be illustrated in the clinical cases presented at the end of this chapter.

Presence, characteristics, and location of people. Simply locating children who need to acquire or elaborate their skills with children who already display those skills can be an effective intervention. Buell, Stoddard, Harris, and Baer (1968) demonstrated this effect experimentally when they deliberately used teacher attention to increase the time that a socially isolated preschool girl spent on outdoor play equipment. Simply being where other children were playing led to social interaction with them and improvement in several social skills with no further teacher direction. Another use of peer presence and characteristics was Furman, Rahe, and Hartup's (1979) study involving 24 children from 19 childcare classrooms who were mildly socially withdrawn. They were randomly assigned to play sessions outside of the classroom with younger peers or same age peers. Although both treatments were effective compared with a control group in increasing classroom peer interaction, play with younger peers produced greater improvement for a larger number of children, perhaps because they had more opportunity to exercise leadership with younger children. The results of these studies draw attention to variables that are operating in natural settings continually and that can sometimes be used effectively to address mild childhood problems.

Mixed income groupings of children in preschool classrooms are currently being evaluated as a strategy for increasing the gains in language development for low-income children. It has been argued that middle-income peers may provide more modeling of diverse vocabulary and perhaps prompt adults to engage in more child-directed talk in contrast with preschools composed entirely of low-income children (Schechter & Bye, 2007). Preliminary evidence confirmed that there were gains in receptive language without additional language instruction. Unfortunately, direct observation in the classrooms did not occur, so we do not know the process by which these gains might have been produced. It is important to remember that locating children together will only be the first step in an intervention program for children with serious social and language deficits. The existence of numerous approaches for the deliberate development of social competence, including language acquisition and use, is testament to the fact that setting the occasion for these behaviors may be a small part of the intervention effort (e.g., Brown, Odom, & McConnell, 2008).

Another dimension of settings pertaining to the presence of people is how many occupy a defined space. It was mentioned previously that Evans et al. (1999) found that parents in crowded homes speak in less complex and diverse ways with their children. As noted by McAfee (1987), there is conflicting evidence about the effects of crowding on negative behaviors such as aggression in group care settings for children, partly because teachers may adapt more structured and directive styles, children may isolate themselves, and the activity that is occurring may affect the outcome. McAfee used an alternating treatments design and observed developmentally delayed adolescents in two public school classes using a portable partition to reduce work space per child. The results indicated that, although aggression was

quite variable across children, the vast majority of them exhibited more aggression during the crowded conditions.

Krantz and Risley (1977) experimentally addressed crowded and uncrowded conditions during kindergarten storytime and teacher demonstration periods. They systematically varied the density of children by seating them apart or together on a blanket, and found that much higher rates of on-task behavior occurred in the uncrowded condition. Contingent praise and classroom privileges, however, were effective in increasing such behavior during the crowded conditions. Studies like these point to the obvious fact that it is sometimes more reasonable and efficient to set the occasion for engagement rather than to provide consequences that are necessary in large part because of the inefficient arrangement of the setting.

20.4.2 The Setting as a System

Most of the research described in the preceding text focused on changes produced in engagement or problem behavior when one organizational feature of a setting was changed. However, each of these elements depends on the others and also on the behavior of people in the setting (e.g., Nordquist & Twardosz, 1990; Thompson, Robinson, Dietrich, Farris, & Sinclair, 1996). Specific architectural features, such as openness for supervision, make it possible for a greater number of concurrent activities to occur because another adult does not need to be present for the space on the other side of a wall to be used. This, in turn, can prevent the problems that may occur from crowding. Similarly, an abundance of toys and books that attract the attention of children in a household may not exert much effect on learning if children's schedules do not leave sufficient time for play and parents' schedules do not include time for them to help their children use the materials.

Nordquist, Twardosz, and McEvoy (1991) investigated the effects of combined changes in spatial division, availability of materials and activities, the daily schedule, and division of teacher responsibilities. They reorganized two classrooms for children with autism that operated in a mental health facility. Each classroom served three school-aged boys with a teacher and aide. Lack of child engagement and teacher frustration characterized these classrooms before the study. The rooms were divided into instruction and freeplay areas of equal size with some toys, many of which were broken, located on shelves. All children and both teachers moved from the instruction area to freeplay together, approximately every 20 min in a sequential schedule. During instruction, one teacher moved from one child to another administering discrete trial training while the aide tried to prevent the other two children from self-stimulating and becoming disruptive. Instructional materials often were out of reach of the teacher, which caused even more waiting. During freeplay, the children typically lay on beanbag chairs, manipulated materials, often in a stereotyped fashion, or wandered around the classrooms; there were no organized activities or games. It was concluded that the organization of the setting was the primary problem because it was promoting dysfunctional behavior and preventing the efficient implementation of individual therapy. Reorganization was implemented in a multiple baseline design and was comprehensive. Most of the classroom space was devoted to freeplay with a smaller area for discrete trial instruction. Freeplay was divided into areas for art, music, small manipulatives, water play, and large motor toys; approximately one-third of these were rotated each week, partially based on children's

preferences, which were recorded daily by the teachers. Children rotated individually through short periods of discrete trial training and longer periods of freeplay, which usually meant that the opportunity to engage in preferred activities followed successful task completion. Teachers assumed responsibility for areas and were not given any instructions about how to interact with children in freeplay other than asking them at the beginning of the intervention to encourage the children to use the materials.

This comprehensive reorganization resulted in substantial increases in children's engagement with materials and compliance in both the instruction and freeplay areas. These increases could not be explained by changes in concurrent teacher attention, prompts, or the use of time-out. An unexpected and more surprising result was the immediate and sustained increases in smiling and affectionate statements teachers directed toward the children, even though there was little increase in the total amount of adult attention children received. The complex combination of setting events that characterized these classrooms at the end of the study clearly served as a quite different context for the individually tailored clinical programs designed for these children.

Space considerations do not permit a comprehensive review of the research on organizational variables or the numerous applications of the results in fields devoted to improving the circumstances of individuals with developmental disabilities and challenging behavior. Additional sources on the use of setting events include a discussion by Kern and Clemens (2007) on classwide and individual applications of antecedent strategies to enhance motivation and prevent problems in schools. Many of these strategies involve changes in the presentation of academic tasks (e.g., Munk & Karsh, 1999), a topic that has not been discussed in this chapter.

20.5 Expert Competencies

The expert clinician is able to apply all of the basic competencies in everyday practice; such a clinician's practice may be defined by the creative use of environmental modification to achieve goals with or without the concurrent use of contingency management or other therapeutic strategies. These psychologists are recognized in their communities as the people to be contacted for consultation or assistance in solving complex problems. These experts understand the implications of the basic competencies for clinical practice and, in each assignment or client case, creatively answer three questions while designing and implementing changes. We begin this section with a review of the implications for clinical practice of the basic competencies and present the questions about the immediate environment employed by experts to shape their practice.

20.5.1 Implications for Clinical Practice

Research on the environment, defined as the organization of space, time, materials, activities, routines, and people, shows that these variables can affect behavior in a wide range of settings where prevention and remediation occur. This research points to the importance of considering the organization of settings as part of the clinical process similar to the importance of considering developmental and cultural issues and the impact of the more distal environment such

as the safety of neighborhoods or economic and social policies. Knowledge about how spatial division, schedules, routines, people, materials and activities can be arranged to produce specific effects can assist with the modification of settings that are contributing to problem behaviors and the design of interventions for individual childhood problems and disorders. It can inform clinical practice and add to clinical competency. Although attention to the organization of settings is not absent in the clinical literature, it is a topic that deserves much more specific focus.

As setting events, organizational variables can produce changes quickly because they depend upon previously acquired behavior for their effects and some of these changes may be broad in scope. However, this also means that they cannot substitute for the individualized therapeutic programming required to remediate well-established dysfunctional behavior or skill deficits. They can, however, be used in conjunction with and in support of such programs and can help insure that settings in which the child practices newly acquired skills provide opportunities and reinforcement for them, and that settings do not, themselves, promote the dysfunctional behavior that is the target of treatment. Modifying such variables often does not require the influx of additional resources but simply the rearrangement of what is already present in a setting.

20.5.2 Integrating Environmental Considerations into Clinical Practice

There are three broad questions that can guide clinicians and others involved in prevention and remediation as they consider the role of the immediate setting while working with the unfolding circumstances of a particular case. The first question is: *"Does the organization of the home, classroom, residential treatment center or other community-based setting generally promote children's safety, supervision, and productive engagement, minimize the occurrence of dangerous situations and dysfunctional behavior, and leave the adults with enough time and energy to participate in the therapeutic process?"* In extreme circumstances, of course, danger to children is addressed by removing them from the home or closing a group care setting. Disorganization coupled with desperate economic circumstances, family violence, or drug abuse can lead to referral to agencies concerned with family survival. In some cases of neglect or abuse, intensive training in basic household safety, cleanliness, healthcare, and parent–child interaction may be warranted, such as the in-home training provided by Project SafeCare (e.g., Lutzker & Bigelow, 2002; Lutzker, Bigelow, Doctor, & Kessler, 1998). Even if children are safe and supervised, they may be involved in so little productive engagement that it may be necessary to implement changes to the setting before or in conjunction with treatment for individual problems, just as adjunctive therapy for mental health problems or marital conflict might accompany parent training for the management of conduct disorder. For example, within a residential treatment program, clinical work to address the high and dangerous levels of aggression of one child could occur concurrently with modification of the schedule and activities of his living unit where there are low levels of productive engagement and many of the children are frequently aggressive.

Parents who are economically secure and who do not suffer from mental illness or marital strife may simply be overwhelmed with responsibilities that prevent them from completing treatment programs, despite the fact that they know a problem exists and desire assistance. For example, a mother with a preschool-aged child who is becoming increasingly noncompliant,

aggressive, and unhappy may be unable to handle the additional responsibility of learning how to implement contingency management procedures if she also has two other young children, a husband who works very long hours and is required to travel, and no relatives or friends nearby that she can rely upon for help. In addition, because she finds it impossible to set up and maintain a predictable schedule of daily routines, partly because of the child's noncompliant, disruptive, and aggressive behavior, the situation is rapidly becoming worse. Even if a mother in such circumstances manages to find a suitable treatment program, she may soon discontinue attending sessions, adding to the high dropout rates for behavioral parent training that are only partially understood (e.g., Barkley et al., 2000; Brinkmeyer & Eyberg, 2003). The stress she experiences just getting through each day would detract from learning new ways of responding to the child and simply getting to the clinic would be a challenge. It is unlikely that continued refinements in parent training methodology or high levels of approval from the therapist would be sufficient to overcome these obstacles; however, discussion and specific guidance about how to modify some of the organizational features of the home, including obtaining assistance from her husband or other sources, could make it easier for her to meet all of her responsibilities and make it more likely that she could implement contingency management procedures to address her child's noncompliant and aggressive behavior.

Another question that is helpful for guiding the use of this knowledge in clinical practice is: *"Can a change in some aspect of the organization of space, time, materials, activities, routines, or people constitute part of a treatment program for a childhood problem or disorder?"* In this case, the focus is on the individual problem rather than the setting as a whole, but changes in the way that some part of the setting is organized could contribute to the treatment, perhaps making it easier to implement or adding to its effectiveness. Evidence that spatial division, materials and activities, routines and schedules, and the characteristics and location of people can affect behavior has appeared throughout this chapter. The case examples provided below show how changes in these features can be tailored to contribute to the treatment for individual children.

A family sought clinical assistance because their 5-year-old daughter filled the time between dinner and bedtime with noncompliance, tantrums, and aggression toward parents, which made it very difficult for their school-aged son to complete his homework or interact with friends. Although it was agreed that contingency management would be a major part of treatment, it soon became clear that the absence of a predictable sequence of routines, including time shared with a parent doing a preferred activity, was probably contributing to the problem and would work against the implementation of treatment. Moreover, the setting was not structured to help produce compliance. Thus, in addition to training in contingency management, the clinician assisted the parents in using routines, scheduling, and materials to set the occasion for the desired behavior. They designed a predictable order of evening routines that culminated in reading to the child before bed. The preferred activity of reading followed cleaning up toys and taking a bath, which was resisted by the child. Adding toys to the tub was a technique used to make it more likely that the child would comply with the instruction to get in the tub and could then be praised by the parent. Although training in contingency management was still a critical component of intervention, it is likely that the reorganized evening routines and materials helped to produce the decrease in noncompliance and increase in cooperation that occurred.

Combining contingency management with modification of some of the organizational features of the home was also used with a mother who sought treatment because her 15-year-old

daughter would not do her homework and had begun to receive failing grades at school. This was one of several problems that had worsened after she and her husband divorced, and it added to their frequent arguments. The mother worked full-time and was taking two classes at night to earn a nursing degree but she was uncomfortable because she feared that her daughter's boyfriend was at the house in her absence. The mother reported that two previous attempts to obtain treatment had ended poorly. One clinician did talk with her about her concerns but did not provide suggestions for improving the problems. Another clinician recommended the use of a token economy at home and at school; however, the teachers refused to cooperate saying that this strategy did not work with adolescents.

Because the mother was under a great deal of stress and showed signs of depression, the therapist referred her to a psychiatrist who prescribed a mild antidepressant and provided cognitive therapy. The therapist also persuaded her to drop one of her evening classes and promised to assist her in obtaining a modified work schedule so that she could take a class during the day if her situation at home improved. Mother, daughter, and therapist collaborated to develop the following intervention. A homework chart was devised so that the daughter could record homework assignments and obtain teacher signatures. The consequence for not doing homework was loss of phone privileges until it was completed. In addition, a number of changes to the space, routines, and schedules of the home were implemented to set the occasion for homework completion and more pleasant interaction between the mother and daughter.

First, rather than beginning homework right after school as previously required, the schedule was changed so that the daughter could talk on the phone, listen to music, or engage in other preferred activities provided that friends did not come over. When the mother returned from work, they would prepare a meal or eat out and converse only about positive topics. This was perhaps easier to do now because there was no need to argue about why homework had not been done. Dinner was followed by a 1 hour study period that took place in the dining room rather than the daughter's bedroom. Small shelves were bought for books and supplies and the computer was set up on the table. Rather than doing her own studying late at night, the mother studied with the daughter. Phones and the TV were off, although music could be played if they both agreed. If homework was completed, the rest of the hour could be spent reading. Getting ready for bed was followed by another period of preferred activities. This schedule was followed from Sunday through Thursday, including the night the mother was in class.

This combination of procedures quickly produced very favorable outcomes in terms of homework completion, improvement in grades, a decrease in arguments, and discontinuation of the homework chart. Within 6 months, the mother was off the antidepressant and had obtained a change in her work schedule so that she could take a class during the day. It is important to note that changes to the setting were made without any visits to the home by the therapist. The therapist included a consideration of organizational variables in discussions with the mother and daughter about factors in the home that might be contributing to the problem, and how they might be changed as part of an intervention. Specific questions were asked about how space, time, materials and activities, routines, and the presence of people operated in that particular home.

The final question is: *"Does the organization of the immediate setting provide any specific supports for a planned intervention or are there any clear hindrances to its implementation?"*

Given that we often take the details of our immediate setting for granted and fail to appreciate the power they might have over our behavior, it is likely that parents, teachers, and staff do not realize what they have on hand to assist them in the implementation of treatment. Flexible space, predictable schedules, the willingness of both parents (or other adults in the household) to share responsibility for the children, well-established routines, and a network of relatives and friends who can be relied upon for help can obviously make it much easier for intervention to be implemented consistently (Dolezal-Sams, Nordquist, & Twardosz, in press). Some family members might also have particular characteristics or knowledge that would be useful for developing ties with a child's classroom teacher who might then be more willing to change some features of the classroom routine for a particular student. Similar supports could be listed for classrooms, residential treatment centers, and other community settings.

On the other hand, it is critical to take stock of the hindrances to treatment implementation that exist in the immediate setting, particularly those that are not amenable to change. Crowded space, lack of people who can be counted on for help, constant distractions, work schedules that do not permit family members to spend much time together, and economic circumstances that do not permit the purchase of materials are realities for many families and community settings that also face difficulties with an individual child who needs intervention. Other hindrances may be more specific to the problem that is being addressed with individual therapy, such as lack of space to exercise for children who are in treatment for obesity, or the lack of transportation that prevents a child from remaining after school for social activities that might contribute to some phases of therapy for social anxiety. Obtaining detailed information about potential hindrances and the supports that could compensate for them would contribute to the design of interventions that would fit into and take advantage of the child's setting.

20.6 Summary

The environment, broadly defined, has long been a concern for clinicians who work with children and their families because it can impact efforts to prevent and intervene with problems and disorders. Research on the environment, defined as the organization of space, time, materials, activities, routines, and people in the immediate setting of the individual, indicates that these variables not only affect behavior, but also are amenable to change in clinical situations. Knowledge about how they work together to promote productive engagement and help prevent problems, and how they can supplement and support interventions designed to treat the problems and disorders of individual children can inform clinical practice and add to clinical competency.

Clinicians can integrate existing knowledge about the organization of the immediate environment into prevention and remediation efforts by asking: (1) whether or not a setting generally promotes productive engagement and discourages dysfunctional behavior and if modification of the setting should be part of the intervention plan; (2) whether changes in the setting should be part of the intervention directed at the problem of an individual child; and (3) if specific supports or hindrances to intervention exist in the organization of a setting. The information gathered as a result of asking these questions will prove extremely useful for clinicians regardless of the setting in which they work.

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